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The OIL WEEKLY

FOR THE DRILLING, PRODUCING, PIPE LINE INDUSTRY

JUL 6 9 1945

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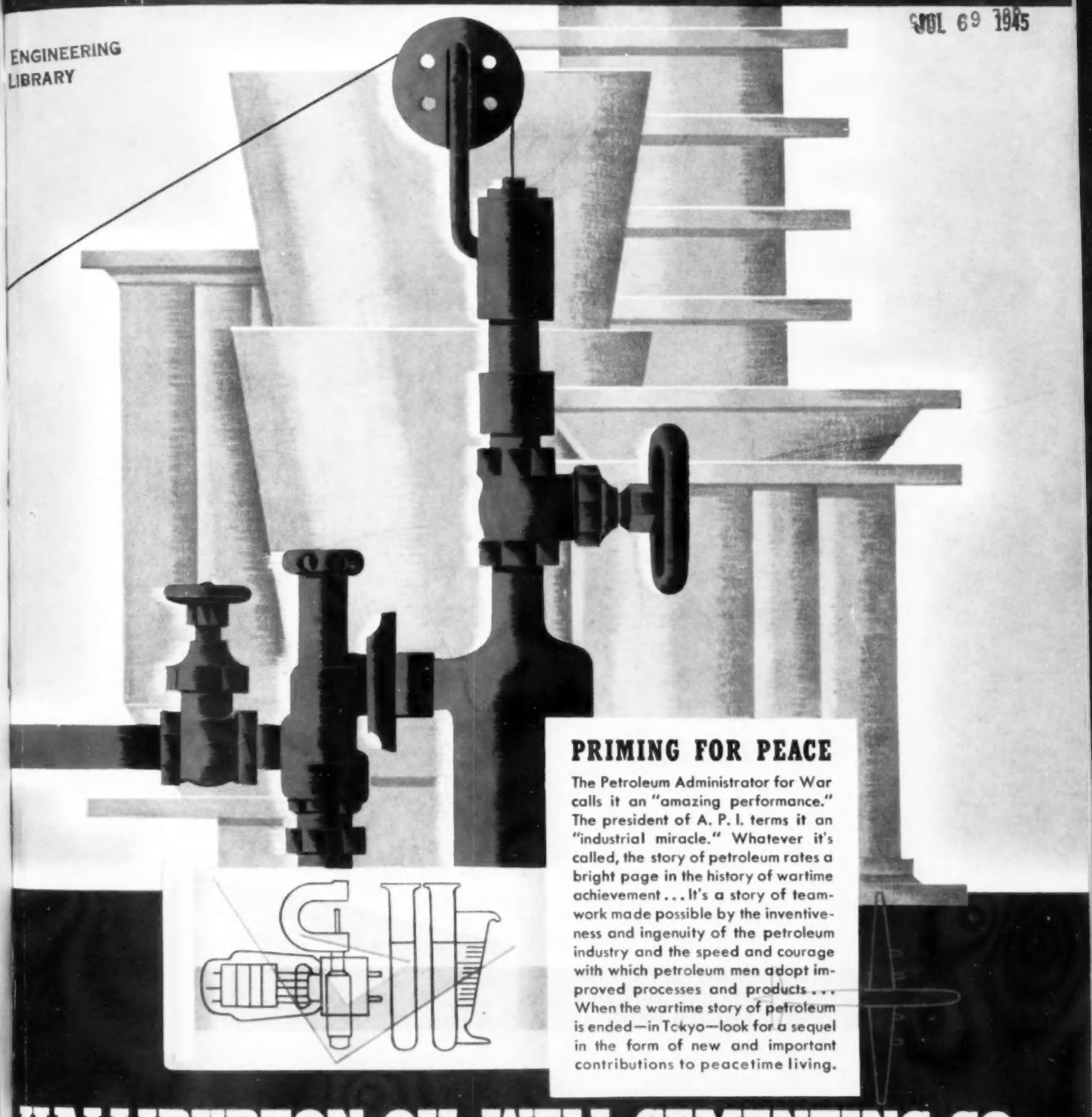

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The Petroleum Administrator for War calls it an "amazing performance." The president of A. P. I. terms it an "industrial miracle." Whatever it's called, the story of petroleum rates a bright page in the history of wartime achievement . . . It's a story of teamwork made possible by the inventiveness and ingenuity of the petroleum industry and the speed and courage with which petroleum men adopt improved processes and products . . . When the wartime story of petroleum is ended—in Tokyo—look for a sequel in the form of new and important contributions to peacetime living.

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VOLUME 118, NUMBER 4

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THE OIL WEEKLY

ENGINEERING • NEWS • STATISTICS

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LOOKING AHEAD
... with the Editor

SPURRED by wartime necessity for increased oil exploration and production, the Rocky Mountain State of Wyoming has been the focal point of much activity during the past 3 years.

The presence of oil in Wyoming has been known almost since the arrival of first explorers. Bonneville mentions it in 1832. But notwithstanding the development of many prolific oil and gas fields, prewar exploration was not as intensive or sustained as in many of the other producing areas.

The wartime drain on U. S. crude reserves made it necessary to widen the search for oil in this country and the vast untested lands of the Rocky Mountain province proved attractive. Wyoming, being definitely established as a petroliferous area, became the center of renewed oil development in the northwest region. Many new operators moved into the state and geological and geophysical parties became engaged in the most extensive survey in the state's history.

The results of this activity have paid off in the discovery of many new oil and gas fields.

The story of Wyoming's geologic features and oil and gas prospects will be told in 2 parts beginning in an early issue by Pierre LaFleiche, State Mineral Supervisor, Casper, Wyoming.

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SEE HOW PIPE AND CASING ARE PROTECTED

HERE is visible unretouched evidence of the vital role which Patterson-Ballagh Casing Protectors play in the war against wear. The center stand is unprotected. Tool joint wear is readily seen. This means the casing, too, is taking a beating. Tool joints of the other stands show no abrasion as evidenced by the many tong marks.

The smaller photograph shows balance of the same string, all with lipped Protectors, and all well protected, *except* for that *one* maverick, first row, third from the left!

This string has just come out of the hole. Drill pipe and the floor beneath are clean as a whistle. This means only one thing—a Patterson-Ballagh Pipe Wiper has been at work.

Patterson-Ballagh Products are now made of PBX synthetic rubber—a development which has meant added resistance to oil and weather.

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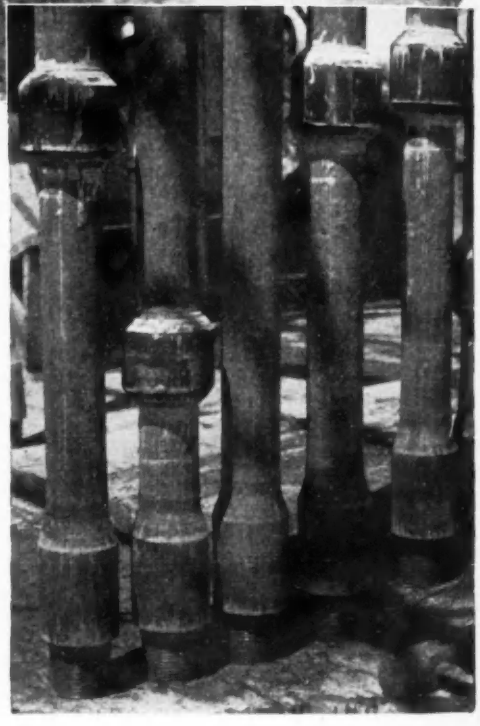

Note wear on the stand third from left... Others are clearly protected with Patterson-Ballagh Protectors.

100% Protection Means a Patterson-Ballagh Protector at *EACH* Joint

The Outlook

Insiders say plans are underway to eliminate as state members on the Interstate Oil Compact Commission all representatives of oil, gas and other interests, including professional lobbyists. New appointees probably would be elected members of state conservation boards.

* * * *

Increased quantities of manila hemp fibre expected from the Philippines in the next few months likely will not help the oil industry because most of the new cordage is earmarked for the Navy.

* * * *

Two rather large deals for East Texas producing leases are nearing completion. They will involve 1600 barrels of daily production and 80-odd wells. The old field has given up lots of oil during its 14¾ years, but its leases are still in demand.

* * * *

Further delay in formulation by Surplus Property Board of a suggested plan for disposition of the Big Inch and Little Inch War Emergency pipe lines is likely. Congress may not be offered a plan by the board until the end of the year.

* * * *

The record petroleum production quota set for July has caused some Texas operators to fear excessive additions to storage and to advocate a reduction in producing rates. However, those close to the military and tanker situation predict otherwise, saying there will be a shortage of crude during the month even at Gulf Coast refineries.

* * * *

Congressional action easing the corporate tax to aid in reconversion will follow if the Senate agrees to proposals not to alter the bill being readied by the House Ways and Means Committee. This, probably will be the only tax legislation enacted this year.

* * * *

The State Department will embark soon on discussions to develop new reciprocal trade agreements, Congress having authorized cuts in rates of duty. Revised agreements will be offered Latin American countries, in some of which petroleum may be a factor.

* * * *

The Navy plans to inventory oil underlying its petroleum reserves. The exploration program will test the shallow zone in heretofore unproven Elk Hills areas and the deeper zones in all three reserves. See page 30.

* * * *

Consumption of natural gas during 1945 likely will exceed 4 trillion cubic feet, a new all-time high. This would compare with 3¾ trillion cubic feet in 1944, and be double the amount consumed in 1937.

* * * *

Seizure of Jap-held oil fields in Borneo and the Dutch East Indies will not cut down much the drain on U. S. stocks but transportation benefits will accrue since a barrel of Far East production is worth five barrels produced in the U. S. and shipped to the Pacific.

* * * *

At the end of 1945 U. S. will have approximately 1000 oil tankers, with a capacity—due to higher operating speeds—equal to the entire prewar world petroleum fleet. In number the U. S. fleet will about equal the prewar total of American, British and Norwegian tankers.

* * * *

Wartime progress in construction of electronic geophysical equipment for oil and gas prospecting will result postwar in magnetic surveying instruments suitable for use in aircraft.

* * * *

The materials situation will be further eased by quiet cutbacks which are following the Army's new estimate of what it will take to whip the Japs. Oil requirements are not being trimmed.

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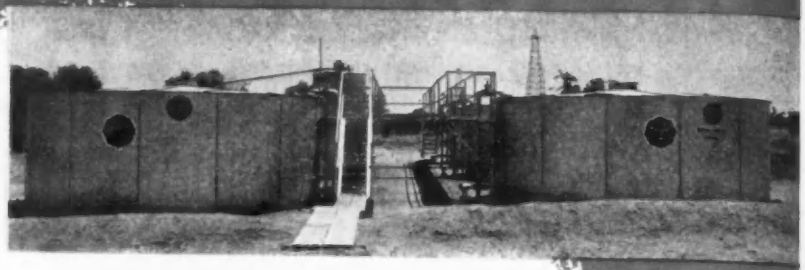

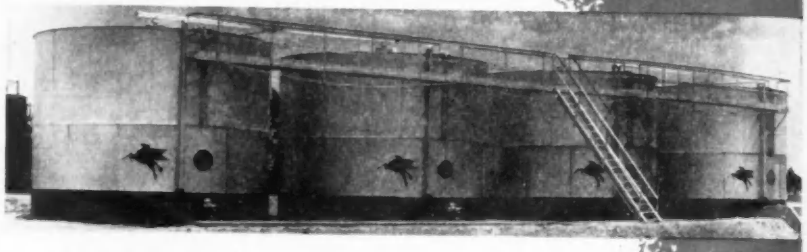

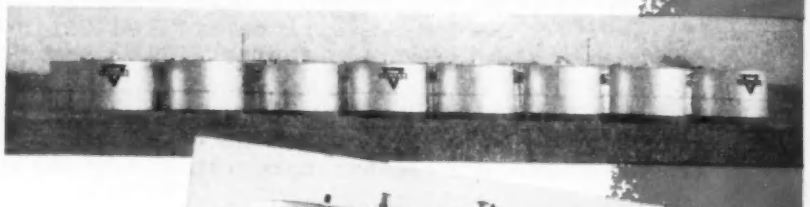

For over 30 years Maloney Steel Tanks have met the exacting requirements of leading oil companies. At right are a few of the thousands of batteries of Maloney Tanks in oil fields and on the war fronts over the entire world. The top photograph shows the armed services training in the assembly and disassembly of Maloney Tanks.

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The Changing Panorama

Dispersing the Fear Of An Oil Famine

HENCEFORTH and especially after V-J day, look for gradual dispersal of the now recurring fears of oil famine. These fears will father an unprecedented wave of oil-finding all over the earth, just as the oil shortage after World War I induced important discoveries.

Since World War I oil-finding has developed from trial-and-error effort into a sure and dependable practical science, utilizing a variety of perfected and still-evolving methods. This science already has revealed billions of barrels of oil although so far it has been turned loose only in limited regions, notably the United States and parts of South America and the Middle East. It proved itself in a noteworthy instance during World War II when the British developed substantial production on their relatively unpromising home islands. The British effectively used all known methods, including refraction seismograph work, which still has its advantages in reconnaissance work, although generally superseded by reflection seismograph for detailed study. They used surface and subsurface geology, magnetic surveys, gravity surveys, the two types of seismic surveys, and also tried and were intrigued by the results of geochemical surveys.

It taxes the imagination to try to foresee how many billions of barrels of petroleum would be discovered by the modern science of oil-finding even in its present stage of development if it were turned loose in earnest upon the great stretches of land still virtually unexplored but recognized to have good possibilities. There are vast areas of such lands of favorable oil possibilities on all the continents, and only in the United States has there been heretofore anything like a thorough or complete search for oil, while the United States itself undoubtedly has many billions of barrels of yet undiscovered accumulations.

West Texas Rigs Not on Idle List

REPORTS that there are many idle rigs in West Texas seem exaggerated. There has been no appreciable curtailment, and only in shallow rigs released through slackening of activity in such fields as Slaughter, Wasson and Fullerton, is the let up noticeable.

On the other hand, the shortage of heavy-duty rigs in the area is becoming more acute. Work is increasing in deep areas like Keystone, TXL, Wheeler and Monahans. The trend toward deeper drilling means rigs are tied up on one location longer than usual, hence intensifying demands for heavy-duty rigs.

Without exaggeration it may be said that the consuming public dictates the policy of even the biggest major oil company.

—B. I. GRAVES, vice president, Tide Water Associated Oil Company.

Fighting Alone For Its Tidelands

ALMOST unnoticed has been the establishment of a precedent for federal government seizure of title to tidelands. This occurred when the Department of Interior recently seized the clam beds of Ipswich, Massachusetts, for the purpose of creating a "bird preserve."

The little village is fighting the battle all alone in Federal District Court at Boston, although the decision will surely set a pattern for the future on all activities conducted in tidelands. If the Department of Interior gets away with this seizure, all rights from fishing to oil development in tidelands may soon come under the jurisdiction of the federal government instead of state governments.

Dr. Barton Was Right

MORE than fifteen years ago the late Donald C. Barton, an outstanding geologist, declared in a paper presented before the (March, 1930) meeting of the American Association of Petroleum Geologists that:

". . . the ultimate production of oil in the area (Gulf Coast) surely will be at least 3½ billion barrels; probably at least 5½ billion barrels; and possibly at least 10 billion barrels. These reserves are composed of oil which can and ultimately will be produced by present day or slightly improved methods of production at crude oil prices within the range of prices of the past decade. The efficiency of recovery of oil from oil sands commonly is believed to range from 25 to 50 percent. The unrecoverable oil is not included within the estimated reserves."

At that time production on the Gulf Coast extended from Pettus and Refugio, lower Texas Coast, to Sorrento, Ascension Parish, South Louisiana, and the deepest production was only 7447 feet. Undiscovered were the prolific fields of Conroe, Tomoconnor, Hastings, Anahuac, Thompson, Tomball, Bayou Sale, Iowa, Paradis, Venice, Eola, Quarantine Bay and many others.

Dr. Barton, in his paper, declared that "all estimates of the amount of undiscovered reserves of oil are guesses—commonly bad guesses." He also said "the figures of the present estimate probably will have to be revised upward within the next decade."

Since January 1, 1930, production of the Upper Texas Coast, Lower Texas Coast, and South Louisiana, has been 2,516,000,000 barrels or 71.4 percent of the 1930 estimate of proved reserves of 3½ billion barrels.

Also since 1930 production limits of the Gulf Coast area have been extended to the Rio Grande River on the southwest and across the Mississippi River on the east. In depth the production has reached 13,520 feet.

The present proved reserves of 6,712,000,000 barrels (API estimates January 1, 1945) plus the production of 2,516,000,000 barrels since 1930 totals 9,228,000,000 barrels or almost equal to the proved and undiscovered reserves of 10 billion barrels thought possible by Dr. Barton.

It is a rather rare thing when a scientist steps out on a limb with a prediction other than of oil actually proven by the drill, but Dr. Barton was not making a wild guess, as his listeners of course knew. He was expressing an opinion based upon a rather intimate knowledge of geophysical work then completed or underway.

Fifteen years have shown that Dr. Barton was not extravagant in his belief as to future Gulf Coast production.

All of which brings up this thought: Oil men know, of course, that our published estimates on reserves include only reserves already proven. Oil men know, too, that unquestionably additional reserves will be found as time moves on. But the public doesn't know this, and the politicians seem not to know it either. As a result someone is continually breaking into hysteria about our running out of oil in a few years. This hysteria is frequently reflected in damn fool investigations and suggestions for damn fool legislation.

The Russians have a different way of estimating reserves, a method which has much to commend it and much to condemn it. They have several grades of reserves, including as grade A the reserves proven by the drill. Other grades which, of course have a value depending upon the depth of conservatism used in estimating them, include known structures not yet drilled. The grades extend on down to include possible areas which have had no geological work but which might well be termed only "prospective."

THE OIL WEEKLY does not suggest following the Russians all the way but it does believe that if, in addition to the actually proved reserves, a "probable figure" were set up on as scientific a basis as possible, it would reduce the element of hysteria on the part of public and politicians and do no harm. The API committee on reserves is composed of men of such calibre as to guarantee a sensible, conservative job along this line if they undertook it.

This "Caterpillar" Diesel D8800 Engine, driving 40-kw. generator, powers 14 well pumps. Using only crude oil for fuel, it has operated 46,525 hours.

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One of the outstanding features of this long record of performance is low fuel cost. *The engine has never burned anything but crude oil*—and the fuel it consumes in a 24-hour day costs about $1.37.

The original cylinder liners ran for 28,000 hours, and, of course, there have been other repairs, all quickly and skilfully made by the "Caterpillar" dealer's factory-trained service men.

The owners are convinced that this rugged power-plant is "superior to anything in its size that is made," and that it will keep on operating efficiently for years to come.

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The Week's News

GOVERNMENT and industry representatives testifying before the Senate Oil Investigating Committee agreed on the desirability of and necessity for a firm national oil policy to support postwar reconstruction of our international petroleum trade. High spots of the hearing were the disclosures that enemy countries in Europe may be using American oil properties and production for the payment of reparations and that transfers of oil-company ships from enemy to allied nations may leave the companies "holding the bag" so far as collecting payment is concerned. A strong policy to meet this situation, and also such problems as payments in depreciated currencies, nationalistic oil programs of foreign governments which lead to uneconomic practices and eventually to government monopolies, and reparations for property destroyed was asked by the industry. Story below.

Germany's Industrial Outlook—How to prevent German industry from regaining its prewar world position through patents, cartels and other devices and from rebuilding its shattered but not entirely destroyed synthetic oil, rubber and other war-promoting industries was the subject of consideration in Congress, which was told that no enemy properties seized in this country will be returned to their former owners. Page 32.

Tidelands Debate—The tidelands controversy, for the moment, simmered down to an exchange of compliments between California's Attorney General Kenny and Secretary of the Interior Ickes, with the latter daring Kenny to carry the issue direct to the Supreme Court for a quick decision. Page 30.

Navy on Oil Search—The first step in the Navy's program to find out exactly what it has in the way of oil reserves was taken with approval by the House of an appropriation for exploration of the shallow and Stevens zones of the Elk Hills field. The Navy plans to explore all three of its reserves in the hope that deep drilling may develop the existence of new large pools. Meanwhile, Congress prepared to take final action on legislation cancelling all outstanding leases in Naval Reserve No. 1 at the expiration of their current terms. Page 30.

New Production High—For the third successive week a new high in average daily oil production for the United States was set for the period ending June 30 when the figure topped the 4,900,000-barrel mark for the first time. Page 31.

PAW Certification—Another all-time peak was set by PAW in its daily 5,213,100-barrel over-all mark for petroleum liquids to be produced during July. Page 31.

Carthage-Ohio Application—Hearing has been set October 15, in Washington, on the application of Metropolitan Eastern Corporation, for authority to build 825 miles of 18-inch pipe line from the Carthage field, Texas, to Hamilton, Ohio, together with five compressor stations and a dehydration plant.

Big Inch Schedule—Operation of the Big Inch pipe line will be kept at 320,000 barrels daily during the next three months, PAW schedule calling for delivery at Longview daily 125,000 barrels of crude from East Texas, 83,000 barrels from Southwest Texas, and 112,000 barrels from West Texas.

Road Oils Banned—An immediate nation-wide ban on production of road oils was announced June 29 by PAW in an amendment to Directive 80 effective immediately. Heavy military demand for residual oil resulted in the order. Manufacture of 18 grades of asphalt cements and medium and rapid curing cutback asphalts will continue.

Borneo Oil Comeback—PAW hears that the Borneo oil fields may have been so handled by the Japanese that they may never return to prewar production. Page 31.

Public Land Office Centralization—Argument for centralization of the handling of oil leases on public lands was introduced before the O'Mahoney committee. Page 28.

OPA and Texas Strippers—OPA has ruled that all new-well statements for wells in 23 Texas counties must be accompanied by the Texas Railroad Commission's supplementary allowable report. Page 32.

Texas Gas Committee—Texas' Governor's Committee will discuss ways and means to oppose encroachment by the Federal Power Commission at Austin July 5. Olin Culberson, chairman said preliminary plans for official appearances would be outlined.

Strong Foreign Policy Urged as O'Mahoney Group Quizzes Rayner

A "strong foreign policy that fully recognizes our national interest in each of the oil areas of the world and promotes a program of action commensurate with our national responsibilities and our future security" is the aim of the State Department, the Senate Oil Investigating Committee was told by Charles Rayner, petroleum adviser to the department, at the opening of hearings on American petroleum interests abroad June 27.

The proposed Anglo-American petroleum agreement, eventually to be a multi-lateral pact, is designed to implement that policy.

Rayner declared the importance of oil is recognized by the department, and pointed out how lack of it was recognized by Germany and Japan in their plans for conquest, which aimed at seizing resources of Europe, the Middle East and the Netherlands East Indies. Lack of an adequate supply was a major factor contributing to the defeat of Germany and will be a major factor in the defeat of Japan, he said.

Rayner estimated that American interests own or hold under concession 10⅛ billion barrels, known oil reserves outside of continental United States, British-Dutch interest 12¼ billion, Russia 6 billion and other interests 2⅛ billion barrels.

He outlined the reciprocal trade agreements in which oil was a factor, and explained the safeguarding provisions in the Venezuelan and Mexican agreements which provide for adjustments in concessions if necessary to prevent harm to domestic industry.

Rayner was unable, however, to explain to Chairman O'Mahoney's satisfaction how the industry would be able to obtain government recognition of injury in advance of its actual occurrence. Domestic producers could act through their congressmen or through the Committee for Reciprocity Information which develops the information on which the agreements are based, Rayner thought. O'Mahoney suggested that as the department develops its foreign oil policy that it "consider ways and means for the industry to protect itself."

Import Situation

Rayner figured that if domestic consumption levels are maintained at 4,700,000 barrels daily after the war and production runs at 1943 or 1944 levels, the deficit would result in imports ranging between 100,000 and 500,000 barrels a day.

"Difference in quality, grade and marketing regions and seasons as between imported and domestic products have frequently been responsible for our imports of petroleum," he explained. "Of the greatest importance, however,

is the size and flexibility of the domestic market. What has happened is that domestic consumption of certain products, including petroleum, has increased at such a pace that when imports also increased domestic production was not displaced but supplemented. Similar factors can reasonably be expected to influence future imports.

"Our commercial policy has never contemplated establishing conditions which would be injurious to efficient domestic industry. In our great home market there should be ample opportunity for the maximum efficient use of the capacity of our petroleum industry. Increased imports cannot be injurious to a domestic industry producing at its maximum efficient capacity."

O'Mahoney pointed out that secondary recovery methods involve increased production costs and asked whether such operations would be considered "inefficient." "Who is going to determine just what is efficient and just what is the best use of the resources of the country?" he inquired.

Rayner replied it would depend upon public interest, general policy of the government and other factors, and O'Mahoney pointed out that in some countries small groups have set themselves up to determine such policies.

Rayner explained that in addition to the economic needs of the country "prudent consideration" should be given to the outlook for national defense, which requires the maintenance of an efficient industry making the best use of our own resources and assurance of continued adequate supplies of oil for at least several decades to come.

"Industry and government are actively collaborating in the task of meeting the first requirement," he said. "The adoption of a sound commercial policy will contribute in a significant manner to the accomplishment of the second requirement.

"It is not in the interest of the United States to run down its oil resources to a point where in times of emergency we would become importantly dependent on foreign sources even to a greater extent than other major consuming countries. But this is a danger to which we expose ourselves unless we are prepared to import petroleum in quantities commensurate with the postwar levels of domestic production and consumption.

States U. S. Policy

"Our commercial policy, moveover, aiming as it does at an expanding trade, seeks to contribute by practicable measures to maintain those conditions of peaceful economic relations with other countries which serve to prevent threats to peace arising from economic isolationism and its consequent enmities and dangers to national defense."

Rayner said the department should give American nationals abroad "all support possible to see there is no discrimination against them, that their activities are amply protected so far as it is in the power of the department to do so."

Senator Brewster of Maine expressed as "unfortunate" the fact that early in the war the United States was unable to make the advance of $15 or $20 million sought by Ibn Saud, which was made by the British, and inquired regarding a loan of $10 million by two American oil companies, which the department is considering. Rayner admitted such discussions were going on but said they were not in his field.

Brewster also questioned the advisability of our getting into the Middle East if our own resources, as contended by J. Edgar Pew of Sun Oil Company, are adequate for many years to come. He also criticised the Anglo-American agreement as excluding Russia, which, he pointed out, also will be one of the world's great oil producers, but Rayner explained that the Soviet government, while advised of the progress of the negotiations, was not interested in international oil trade.

War Department support of the agreement was voiced by Brigadier General H. L. Peckham, liaison officer for petroleum, as one of four recommendations the department has on national oil policy.

Peckham declared that foreign oil resources, controlled by our nationals, are considered important as an additional reserve in case of war. Such supplies would be of value to our forces, which presumably will occupy postwar bases outside the United States, in addition to

Favors Centralization for Records And Leasing of Public-Owned Lands

Centralization in one agency, preferably the General Land Office, of the responsibility of maintaining an accurate record of the land holdings of the Federal Government, and concentration under one head, preferably the Interior Department, of the leasing and development of government-owned oil lands was recommended to the Senate Oil Investigating Committee by Assistant Secretary of the Interior Oscar L. Chapman as hearings on domestic oil resources were resumed June 25.

No accurate figures of federally owned acreage are available, he said. Several agencies have an interest in oil lands, not all of which adhere to the same policies.

Lower Royalties Unlikely

Recent negotiations between a departmental committee and representatives of the industry have resulted in the submission of recommendations to Secretary Ickes that improvements be made in leases and unitization agreements and the allowable leased acreage be increased. Recommendations of the industry for a lowering of royalties, however, are not expected to meet with favor. Under the Act of August 21, 1935, this average is only 13.56 percent.

The department does not agree with predictions that a shortage of oil is many years away, and asserted that "the known reserves of petroleum in the United States, measured against the anticipated peacetime need, both civil and military, leaves but one conclusion"—that the nation desperately needs additional oil reserves.

Chapman said there are 6584 oil and gas properties under leases in 20 states and Alaska aggregating 4,149,000 acres; 6527 on Indian lands covering 859,220 acres, and 18 on Naval Petroleum reserve No. 2, embracing 9198 acres. The department is responsible for the supervision of more than 38,000 wells, with 5627 producible oil and 450 producible gas wells on public land leases, 11,409 oil and 450 gas wells on Indian lands, 332 oil and 15 gas wells on the Naval reserve, and some 20,000 wells in drilling or in a suspended status, abandoned, or permanently plugged and abandoned.

During 1944, 79,515,490 barrels of oil with a royalty value of $10,692,405 was produced on these lands, and from 1920 to the end of last year, the public lands produced 786,316,477 barrels of oil, 1,252,837,067,000 cubic feet of natural gas and 1,463,395,000 gallons of natural gasoline and butane, with a royalty value of $130,083,892. The naval reserve, in the same period, produced 141,776,620 barrels of crude, 131,233,646,000 cubic feet of gas and 332,630,250 gallons of gasoline and butane, with a royalty return of $34,594,436. Figures on the Indian lands are not obtainable prior to 1937, but in the past ten years approximately 251,052,000 barrels of oil, with associated gas, have returned a royalty income to the Indians of $46,073,839.

Departmental estimates of total recoverable oil reserves underlying public, Indian and Naval Petroleum Reserve No. 2 lands under departmental supervision in California, Colorado, Louisiana, Montana, New Mexico, Oklahoma, Utah and Wyoming are 1,615,589,000 barrels, as of last January 1. Total petroleum reserves underlying lands of all categories in the same states are estimated at 7,779,767,000 barrels.

He defended department policies for unit operation, on the ground that they led to conservation and orderly development.

Development Slow

Harold J. Duncan, chief of the conservation branch of the Geological Survey explained that the major public-land states of Montana, Wyoming, Colorado and New Mexico have been developed slowly, not because of impediments raised by the department but for other influencing reasons, such as the distance from important refinery centers, scarcity of local markets, added cost of wildcatting, inadequate pipe line facilities and inadequate transportation. Many large producers have been deterred from entering these four public-land states for these reasons, he testified.

"The history of development under the federal mineral leasing laws shows that the increase in royalty rates provided by the 1935 act has not resulted in a reduction of the rate of prospecting on the public lands," he said.

providing armies of occupation in enemy countries, he said.

The department also concurred that oil is important to the future peace of the world and, since the United States oil industry has lead the world "from our own national standpoint, as well as from the standpoint, as well as from the standpoint of world-wide prosperity and peace, it is important that the activities of American nationals should be continued not only in the United States but in foreign fields.

"For these reasons, American companies should not only continue but increase their production of foreign oil," Peckham said. "United States petroleum resources and developments in foreign countries might present at times problems of protection and evacuation of personnel and protection of property. Our nationals should be fully protected in the development of their legitimate enterprises in the Middle East and other foreign fields. They should have the assurance that they can compete on equal terms with other nationals.

"All possible arrangements should be made to prevent American nationals from disposing of their foreign oil resources by sale or lease without the approval of the United States government. Only in this way can the nation be assured of all possible utilization of foreign resources for defense needs in the future."

Army Recommendations

Peckham said it may also be desirable to establish military reserves abroad.

He recited department recommendations as follows:

1. A pledge by our government to protect American nationals abroad in the pursuit and development of their legitimate enterprises and to support them in their legal rights.

2. Encouragement to foreign petroleum enterprise by United States nationals with a view to the maximum importation of petroleum to the United States consistent with the maintenance of a progressive and economically stable domestic petroleum industry.

3. Early adoption and implementation of the Anglo-American oil agreement and the multilateral agreement contemplated therein.

4. Acquisition of military reserves outside the continental limits of the United States when such course is determined to be in the national interest.

Charles W. Hamilton, vice-president of Gulf Oil Corporation, testified that American interests are known to own or have share in production or reserves in 20 foreign countries, are directly or indirectly engaged in exploration in 11, but do not share in either production or reserves in 19.

The fact that Americans have prospective oil lands in so many countries and have developed a substantial proportion of the estimated reserves outside the United States is due, he said, to "the American competitive incentive in commerce and the belief that such foreign ventures are in the best interest of our government, both, in time of peace and war."

USGS Loses Fund for Exploration in Alaska

Final action on the Interior Department appropriation bill for the fiscal year which began July 1 gives the Bureau of Mines $7 million for its synthetic liquid fuel program. The bureau will get $579,000 for oil and gas investigations, $78,400 for helium utilization, and $173,212 for the Petroleum Conservation Division.

The Geological Survey was given $150,000 for surveys of areas containing deposits of petroleum and strategic minerals by geophysical methods, but lost the Senate-supported proposal for $35,000 for development work in Alaska.

No Oil to Philippines

The Foreign Economic Administration has announced that it will not consider applications to export petroleum or products to the Philippine Islands until further notice, because such exportation is under control of the Army and Navy and no commercial shipments are being permitted.

Criticizing past policies of the State Department, vigorous only when the public felt the need of foreign oil supplies, Edward F. Johnson, general counsel of the Standard Oil Company (New Jersey), said that while operating programs of American companies abroad should be in accordance with the clearly defined policies of the government, they should in turn receive its wholehearted backing.

In recent years, Johnson indicated, the department has been active in its support of the industry. In Iraq and Netherlands East Indies, it has made it possible for American oil interests to share in production; it has been less successful in Argentina, where the industry's position has steadily deteriorated, and has been unable to overcome the determination of Uruguay to handle its petroleum affairs by government control, and has been able to accomplish little in Chile, Brazil, Bolivia or Mexico. In Venezuela, he said, serious problems having been satisfactorily solved, "the climate is now favorable."

While in the Middle East and Netherlands East Indies American fared "acceptably," he said, "on the other hand, there are some countries with oil-producing possibilities from which American oil interests are either barred outright or are faced with inhospitable laws. In India and Burma the door is closed to them. In China and the Philippines the laws relating to the production of oil favor their nationals to such extent that American oilmen are not likely to participate in development there until such laws are changed, though in these two countries marketing operations are carried on successfully for many years prior to the war."

Policy Recommendations

Johnson said that more specific recommendations on national oil policy will be subsequently submitted, but that generally the industry recommended the following broad policies:

That a national oil policy be developed by congress;

That in relations between the Department of State and the industry, it is important that there be mutual understanding, confidence and close cooperation;

That the backing of the industry by the government be proclaimed;

That all foreign oil matters be centralized in the State Department as soon after the end of the war as may be appropriate; and

That treaties between this country and other oil countries definitely establishing mutual rights and obligations be negotiated.

Johnson also told of special problems created by the war, particularly the taking of oil by Rumania from the subsidiary of an American company, for delivery to Russia in payment of reparations, for which it is paying in depreciated local currency.

He also called attention to the refusal of Russia to permit Americans to visit Rumania, Hungary and Poland to inspect their properties, and raised the question of what will happen with respect to properties located in areas of enemy nations which have been or may be ceded to others, urging that in all cases where the acquiring nation takes over American properties they should be paid for in dollars or continued in the ownership of the organization to which they originally belonged.

"Unless some program is worked out to prevent such action or to make proper adjustments in such cases, our allies will obtain sound value on their general claims against the defeated enemy at the expense of Americans and the affected American nationals will be relegated to the status of general creditors of the bankrupt enemy."

Problems of marketing and foreign exchange were outlined by Walter L. Faust, vice-president of Socony-Vacuum Oil Company, and J. E. Cran, director of Standard Oil Company (New Jersey) in charge of finance.

Reconstruction of a strong marketing position throughout the world is one of the major postwar problems of the industry, Faust said, explaining that with the increased production outside the United States which has been developed under the impetus of war, the problem will be not of production or refining but rather of finding a market for the available supply.

Prior to the war, he said, many governments had insisted that American companies build uneconomic refineries within their borders for nationalistic reasons, and recited how some countries built up barriers and introduced government-owned or encouraged refining and marketing organizations which eventually would develop into government monopolies.

His presentation elicited from Senator Wiley of Wisconsin the comment that, in view of the great service rendered by the oil industry during the war "the flag should follow trade" and "it is up to the government to play ball with the industry."

Ickes Denies Wanting Any but Oil Rights, Seeks Quicker Court Ruling

Secretary of Interior Ickes last week declared his willingness to support legislation abandoning all federal claim to submerged lands other than the areas containing petroleum deposits.

"My only interest in this matter is oil —the same oil in which the Navy has been so interested in all the previous discussions before congressional committees of submerged oil-bearing lands," he declared.

"A nation without oil is today defenseless. I would be grossly neglectful of the public interest were I a tacit witness to the reckless exploitation of a resource so critical where substantial doubts exist as to its ownership."

At the same time, Ickes said, "I am no more willing than you (state's attorneys general) seem to be that there should be any legal action which would raise the question of title to other than petroleum-bearing lands and which would, therefore, be disturbing to state, municipal, or even to private interests."

Ickes challenged Robert W. Kenny, California attorney general, to join in recommending to the United States Attorney General the dismissal of the California action and the filing of a suit in the Supreme Court to clear the title of the government to the oil lands involved.

Would Speed Decision

This, Ickes said, would immediately remove any cloud that may exist as a result of the suit, except only to the oil areas, and even as to those lands the question would be settled in a matter of some ten months "instead of eight or ten years as might happen under the pending litigation."

Another result, he added, would be that "no member of Congress or, for that matter, administrative official like myself, would be put on the embarrassing spot of having to decide whether to yield to private interests what might amount to billions of dollars of federal revenues" involving irreplaceable oil.

Kenny in his statement had pointed out that the secretary "knowingly or otherwise" ignored testimony of government attorneys during the hearings on the Nye resolution in 1939 that if the government took oil from California coastal lands, it would necessarily follow as a matter of law that they would have to go in and take over all of the ports and harbors in the United States, because lands under coastal and inland navigable waters are all held under the same legal principle of state sovereignty.

"The 46 attorneys general believe that there is no justification in the secretary's claim that this matter should be litigated any further," Kenny added. In support of this belief they refer not only to the many decisions of the Supreme Court but to the rulings of Mr. Ickes himself. He consistently up to 1937 ruled in his official capacity as secretary, that lands off the coast of California and elsewhere belong to the states.

"In 1933 he denied an application for a federal oil lease off the California coast on the basis of a United States Supreme Court decision holding that the state of Illinois owned the beds of navigable lakes within that state. He held that the same principle of law applies to lands off the coast of California as to the bed of an inland lake in Illinois. He now reverses this position. That is why attorneys general from inland states are apprehensive.

"In 1937 he made an official ruling that the State of California owned not only its coastal lands but also all of the oil within these lands. These decisions of Mr. Ickes were based on the long line of United States Supreme Court decisions upon which the attorneys general now rely. Vast sums of taxpayers' money have been spent on the faith and integrity of these decisions. Mr. Ickes' present reversal is a flagrant breach of that faith. It is just what the attorneys general say it is, namely, an unwarranted attack on the sovereignty and property rights of every state in the Union."

The theory of state ownership of the marginal seas was given strong support June 28 before the Senate Oil Investigating Committee by Dean Edwin Borchard of the School of International Law at Yale University, who cited precedents for his opinion that the United States may properly claim ownership of or jurisdiction over the natural resources in the subsoil beyond the marginal sea. He cited the case of the British-protected Ceylon fisheries, which extend 20 miles out into the Indian Ocean, the 20-mile claim of Ireland to its oyster beds, etc.

In effect, the international law authority held that the federal government may extend its jurisdiction for a reasonable distance into the ocean, although he admitted that if the distance claimed was excessive some objections might be raised by other powers. He held, however, that law and practice had determined that ownership of the subsoil under coastal waters lay with the states, although he agreed that few court decisions have ever dealt specifically with the question.

States Given Support

"All the states, whatever their origin, can legitimately lay claim to the common law right to exercise sovereignty over the marginal seas, subject to such federal rights as may be exercised, claimed or reserved by or to the federal government under the constitution and common law jurisdiction to control their natural submarine resources of the continental shelf beyond the marginal sea," he asserted.

Dr. Dorchard also held that, in view of the contradictory federal record, which he said both accepts and rejects the three-mile rule under certain circumstances, and in the absence of any controlling federal legislation or decisions, "we are justified in believing that the state definition of marginal sea is acceptable to the federal government or that the common law rights of the states are admitted."

If legislation pending in Congress to abandon federal claim to lands under coastal waters, navigable rivers and lakes is enacted, "the rest will take care of itself," he said.

The legislation, he held, however, is merely "confirmatory" of existing law. Questioned as to who would own oil produced by a private company drilling a well 50 miles off the coast of Louisiana, the witness said he would expect the federal government to make a claim since Louisiana claims only 27 miles.

Naval Reserve 1 to See More Exploratory Work

An additional $7,570,000 has been provided for the Navy in the final 1945 deficiency appropriation bill, $50,000 to purchase the Kern County Land Company's fee interest in a half section of land in the eastern part of Naval Reserve No. 1 and the remainder for an exploratory program designed to develop new locations for wells to maintain the present 65,000-barrel daily production, and beyond that to make an estimate of the recoverable oil contained in the whole reserve.

The department plans to drill 40 wells into the shallow zone at an average cost of $60,000 each and 24 into the Stevens zone at an average of $250,000, a total expenditure of $8,400,000, of which $1,886,675 will be borne by Standard Oil Company of California.

So far, all of the production activities in the reserve have been confined to the shallow zone under some 10,000 acres in the eastern part, and no investigation has been made of its possibilities in the remaining 33,000 acres, nor has any exploration work been carried into the deeper zone except through seven wells in the eastern half of the reserve.

Nearly all of the favorable locations in the developed areas have now been drilled, and in order to maintain the 65,000-barrel production through 1946 new well locations must be found in the undeveloped western section. The 40 shallow wells which it is proposed to sink will accomplish this purpose, as well as providing additional information on the extent of the pool.

Hugoton Well Applications Total 144; Only 18 Denied

Only 18 of the 144 applications which have been received for permission to drill new wells in the Hugoton natural gas field since the Oklahoma and Kansas portions of the field were declared a restricted area on May 1, have been denied by PAW. Deputy Administrator Davies reported 73 granted permits for immediate drilling, 27 for drilling in the last quarter of 1945, while 26 are still pending.

Borneo Production May Be Years Reaching Prewar Level, PAW Says

Possibilities that the Borneo oil fields may have been so depleted by the Japanese during their three years of occupation as never to return to prewar production level were raised last week by PAW.

At the best, it was said, while recovery of the fields will help increase oil supplies for the Pacific war, under full prewar production they could provide only 55,000 barrels daily toward the 7 million barrels needed by the United Nations. However, it was declared by PAW June 29, considerable time will be required to bring the output back to prewar levels, since, while some of the fields, notably those on Tarakan Island, might be put into production in a relatively short time despite damage by the Japanese, others may require from one to two years to reach prewar levels.

Equipment Lined Up

The requirements for equipment necessary to rehabilitate the Borneo fields, about 60 percent of the capacity of which has so far been recovered, already have been anticipated, Deputy Administrator Davies said, but a survey will be necessary to determine the extent of Japanese damage before supplies are shipped, to minimize the overloaded shipping situation.

"The Japanese are known to have operated the wells intensively and may have so depleted them that further drilling may not be worth while," it was said. Many of the wells have been reported burning for the past two or three weeks.

Capture of Tarakan, PAW said, will give our forces possession of wells that produced about 15,000 barrels daily in 1940. These wells were destroyed before the Japanese occupation in 1942, but are believed to have been brought back to a daily production of perhaps 8000 barrels when they were taken early last month by Australian forces. (Also see page 56.)

While production in the Tarakan field had not been brought back by the Japanese to the prewar level, they are believed to have done better with the Borneo fields, which were reported to be yielding more than twice their prewar tonnage last year.

Recovery of the Borneo fields, Davies said, will give an appreciable advantage in the Pacific fighting because the fields are especially adaptable to production of fuel oil for ships and also because they are close to war operations.

More benefit is expected to be derived from the recovery of other fields in the Netherlands East Indies, PAW said. Total production of the NEI in 1941 was 170,000 barrels daily, of which Sumatra provided more than half. In the three years of their occupation, the Japanese are believed to have restored output to a level of about 140,000 barrels daily, representing perhaps 90 percent or more of Japan's total oil production resources. The Burma fields now lost to the Japanese, produced about 21,000 barrels daily in 1941, but were cut down to less than 3000 barrels a day last year by operations of the Eastern Air Command.

Another High

United States production of crude oil again broke all previous records in averaging 4,909,820 barrels daily in the week ended June 30. Output was about 10,000 barrels a day higher than that in the preceding week, which was the highest on record up to then.

Importantly responsible for the week's increase was Illinois, which averaged 213,500 barrels daily compared with 205,800 a day the week before. Arkansas rose to 79,650 from 78,700, Louisiana to 368,050 from 367,900, Mississippi to 51,200 from 50,600, Oklahoma to 388,400 from 384,300, Wyoming to 110,300, from 107,850.

Texas was unchanged at 2,180,400 daily. California declined to 947,200 daily from 948,900 per day the previous week, Kansas to 273,250 from 276,500, Michigan to 46,550 from 49,450.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED June 30	June 23
Alabama	700	700
Arkansas	79,650	78,700
California	947,200	948,900
Colorado	11,250	11,550
Florida	15	15
Illinois	213,500	205,800
Indiana	12,900	11,800
Kansas	273,250	276,500
Kentucky	30,600	29,600
Louisiana	368,050	367,900
North Louisiana	69,200	69,050
South Louisiana	298,850	298,850
Michigan	46,550	49,450
Mississippi	51,200	50,600
Missouri	100	100
Montana	24,570	25,090
Nebraska	900	900
New Mexico	104,400	104,400
New York	13,300	13,900
Ohio	6,550	6,500
Oklahoma	388,400	384,300
Pennsylvania	36,900	36,650
Tennessee	35	35
Texas	2,180,400	2,180,400
Upper Gulf Coast	563,100	563,100
East Texas Field	377,600	377,600
Rest of Eastern Texas	139,850	139,850
Lower Gulf Coast	253,550	253,550
Southwest Texas	82,800	82,800
South Central Texas	21,350	21,350
West Texas	497,550	497,550
North Texas	154,600	154,600
Panhandle	90,000	90,000
West Virginia	9,100	7,700
Wyoming	110,300	107,850
Total United States	*4,909,820	4,899,340

* New all time peak.

PAW Certifications for July at New High Mark

July production of all petroleum liquids was placed by PAW last week at an all-time record high of 5,213,100 barrels daily, of which 4,879,900 barrels will be crude oil and 333,200 barrels natural gasoline and other liquids. July certification represents an increase of 20,300 barrels daily of crude and 700 barrels of other liquids over June.

Increased crude production will come from five states—Oklahoma, increased from 370,000 to 380,000 barrels; Alabama, 400 to 500; Colorado, 10,500 to 12,000; Wyoming, 113,500 to 118,200, and California, 949,000 to 952,000.

Montana will produce less—reduced from 23,000 to 22,000 barrels—and the remaining states will produce at June levels, as follows:

New York, 120,000 barrels; Pennsylvania, 37,000; West Virginia, 8200; Illinois, 200,000; Indiana, 13,000; Kansas, 274,000; Kentucky, 28,000; Michigan, 47,000; Nebraska, 1000; Ohio, 7000; Arkansas, 820,000; Louisiana, 360,000; Mississippi, 53,000; New Mexico, 105,000, and Texas, 2,170,000.

In natural gasoline and condensate, California increases from 60,200 to 60,900 barrels, with the other states maintaining their June figures, as follows:

Pennsylvania, 800 barrels; West Virginia, 5000; Illinois, 12,000; Kansas, 4100; Kentucky, 2200; Michigan, 700; Ohio, 600; Oklahoma, 28,000; Arkansas, 5000; Louisiana, 42,500; New Mexico, 5000; Texas, 163,000; Montana, 300, and Wyoming, 3100.

April Peak Reflected in Bureau of Mines Figures

April output of crude reached a new peak of 4,801,000 barrels daily, an increase of 2000 barrels over the previous month, and while demand for domestic oil increased 83,800 barrels daily, it averaged only 4,792,700 barrels, permitting an increase in domestic-crude stocks of 8100 barrels a day, the Bureau of Mines reported.

Over-all demand, however, exceeded total supply, and stocks of crude, domestic and foreign, dropped from 229,644,000 to 229,555,000 barrels during the month.

Crude runs to stills increased 55,000 barrels to a daily average of 4,774,000 barrels, the bureau stated. The gasoline yield dropped from 40.8 to 40.3 percent, but total deliveries of military and civilian motor fuel were about 72,000,000 barrels, or 25 percent greater than in April, 1944. Total stocks of refined oils dropped 2,847,000 barrels during the month, to 220,443,000 barrels April 30.

The Bureau of Labor Statistics reported the price index for oil and products at 64.2 for April, against 64.3 for March and 64 for April, 1944. The crude capacity represented in the report was 5,039,000 barrels, indicating an operating ratio of 95 percent, compared with 91 percent in April, 1944.

Restricting German Ability to War By Industrial Curtailment Outlined

Unless the Allies take steps to deal with Germany's potentialities for recovery, she could rebuild toward another war within comparatively few years, Leo T. Crowley, head of the Foreign Economic Administration, said last week.

While some segments of the chemical industry, e.g., production of synthetic petroleum, were substantially curtailed by bomb damage in the latter stages of the war, substantial sections are capable of high level operation in the near future, "given an opportunity to repair and rehabilitate," he reported.

Between 1935 and 1944, Germany increased her production of synthetic oil from 300,000 to 5½ million tons and raised her production of natural petroleum within her own borders from 300,000 to 1 million tons. In rubber, between 1933 and today, she developed a synthetic capacity of more than 100,000 tons.

Crowley declared that any policy developed for control of German industry to prevent World War III must be realized as one committing the United States "for many decades."

To that end, FEA has undertaken 29 projects, one of which is the "post-surrender treatment of the German oil and petroleum industry" and another the post-surrender treatment of the German rubber industry.

Through exhaustive reports to be prepared, United States policy officials will determine what is to be done with industries which provide the basis for war. Study of the treatment of the German oil and petroleum industry is being made by this group: PAW Deputy Administrator Davies, chairman; Rear Admiral A. F. Carter of the Army-Navy Petroleum Board, Brigadier General H. L. Peckham of the War Department fuels and lubricants division, and Charles Rayner, petroleum adviser to the State Department, (Colonel Jay L. Taylor of the War Department, alternate).

Berge and Cartels

Assistant Attorney General Wendell Berge, head of the anti-trust division of the Department of Justice, warned June 28 that German industry "hopes to remain untouched by Allied occupation and within Germany the industrialists will endeavor to maintain the core or organized research personnel and technical facilities upon which their know-how depends."

Other objectives of German industry are to continue the economic domination of Europe, regain its foothold in world industry, and recover seized holdings.

Berge pointed out that our policies following the last war failed to prevent German industry from quickly regaining its postwar world position.

"The Germans hope to rebuild their industries and maintain their foreign investments by giving American and British industrialists shares in their enterprises," he said. "This may almost seem ridiculous but it was definitely stated by one of the leading industrialists of Germany who is now a captive of our armed forces.

"The Germans hope to retain the physical, political and economic basis of their military power. They will seek to regroup and consolidate both their domestic and their international position through the various subterfuges and devices which have been employed previously and which they believe have a chance to work again. This includes cartel agreements, technical and financial affiliations, the use of foreign agents and of neutral representatives and similar stratagems. Their success in these efforts would imperil world peace."

Midwest Fuel Oil Put on Rations; No More Gasoline

Declaring that there is no prospect in the near future of any further increase in civilian gasoline rations—increased last month—or of any better heating oil supplies than were available last year, Deputy Administrator Davies warned last week that more difficulty is expected in meeting the requirements for the all-out war against Japan than was experienced heretofore in filling the needs for two war theaters.

The quality of civilian motor gasoline will remain about the same as long as tetraethyl stocks continue short although, he promised, as soon as more metallic lead is available the quality will be improved.

The fuel oil situation is so serious that rationing has been extended to residual fuel oil in the Midwest, heretofore free of restrictions, and consumers there next winter will be limited to two thirds of their normal requirements for heating.

"Until V-J day, Navy requirements for fuel oil will continue to mount," Davies explained. There just is not enough for Navy requirements and, at the same time, to give civilians more than they had last year.

"World-wide United Nations requirements for military and essential civilian activities, not including Russia, will jump 8,400,000 gallons a day during the next six months."

The latest area to be brought under fuel oil rationing comprises Michigan, Wisconsin, Minnesota, North and South Dakota, Iowa, Ohio, Indiana, Illinois, Missouri, Nebraska, Kansas and Kentucky.

Residual fuel oil stocks in those states, the Office of Price Administration said in announcing rationing June 25, are at the lowest level reached during the past five years, and nation-wide stocks also have been sharply reduced and now are about 11,000,000 barrels less than 1944.

Texas Strippers Each Must Show Supplemental Order

The OPA last week ruled that all new-well statements filed after July 1 for wells in 23 Texas counties must be accompanied by a copy of the supplementary allowable report issued by the Texas Railroad Commission for each completed new well in order to make it eligible for subsidy.

The order will apply to the counties of Archer, Baylor, Brown, Callahan, Clay, Coleman, Comanche, Cook, Eastland, Erath, Foard, Haskell, Jack, Jones, Montague, Palo Pinto, Shackelford, Stephens, Taylor, Throckmorton, Wichita, Wilbarger and Young.

Wells in these counties granted a "new pool allocation," by the Railroad Commission after January, 1944, will be ineligible for subsidy under the stripper-well program, and will be regarded as new pools discovered since that date.

It was explained that these pools have been ineligible for premium unless specifically authorized. In such cases the wells will not be specifically listed as ineligible but Defense Supplies Corporation would be notified that the new well statements for these wells have been disapproved by OPA, the effect being that DSC will not make any premium payments on oil from them.

OPA said it is writing individual producers in the 23 counties for copies of the supplementary allowable reports covering each well thus far approved for premium and to find out whether any wells previously approved are ineligible. If the "new pool allowable" is revoked by the commission and the well in question placed in the same category as stripper wells in the same county, approval of a new premium will be granted. In all such revocations another new well statement should be filed, accompanied by the revised supplementary allowable report and premiums will be effective upon arrival.

Redeployment Oil Problems Outlined by Administrator

Problems which face the oil industry of the Gulf Coast states in the transfer of destinations for petroleum from the European theatre to the Pacific include reversing the flow of the bulk of the oil from east to west, and meeting increased requirements for distillates and fuel oil with which to power naval operations.

Deputy Administrator Davies explained that the Pacific demands will be greater not only because of the large naval forces but because distances are so tremendous.

After V-E day, PAW halted the eastward flow of 100-octane aviation gasoline through the Little Big Inch and is placing part of it in Gulf Coast storage. Because storage facilities in the Pacific are limited, the gasoline will be retained in this country while planes and other equipment are being moved to their new destinations.

More tankers are being alloted to Gulf service as fast as they can be transferred from the Atlantic.

Changing Rams in Cameron Type "QRC" Blowout Preventers Is Now *A Matter of Minutes!*

Any "oil field hand" who has ever changed a set of blowout preventer rams will find it hard to believe that the largest size rams can now be changed *in a few minutes time* . . . unless he is familiar with Cameron's new "QRC" model. Actually, the change requires only (1) the loosening of four hammer lug nuts on each bonnet, (2) turning a pressure control valve to "open" position, thus withdrawing the rams from the preventer body, and (3) lifting straight up on the rams with the cotline. These simple operations in reverse order completes the ram change.

Of equal importance is the fact that the new "QRC" model provides an eight-to-one ratio of closing pressure to well pressure, that is, 1000 lbs. closing pressure will close the rams against approximately 8000 lbs. well pressure. This more favorable ratio is made possible by a unique by-pass on the lower side of the rams which diverts well pressure to the rear of the rams as an aid in closing.

In addition to these and other entirely new but proven mechanical features, the Cameron Type "QRC" Pressure-Operated Blowout Preventer makes generous use of features of earlier Cameron models, including the famous Cameron patented self-feeding ram packing element which permits pipe movement and/or rotation thru the closed rams while heavy mud is circulated to subdue "kicking" pressures.

Complete details will gladly be sent to interested operators on request.

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The TXL Field

By H. H. KING, Staff Writer

A BACKLOG of more than 100 proved locations is confirmed for the TXL field, Ector County, most important discovery for the current year in the Permian Basin sector of West Texas. This area yields premium quality crude from the 800-foot Devonian, and the 9800-foot Ellenburger that is confined to the apex of the long structure. The Silurian lime, an intermediate zone is a potential source of oil production, but apparently restricted to the Ellenburger producing contour.

Twelve or more companies will participate in the development, which is expanding as heavy-duty rotary rigs become available. Currently there are 7 flowing Devonian wells, proving a northwest-southeast trend for more than 3 miles and averaging a mile in width, with favorable prospects of extending in excess of 6 miles along the strike. These wells cost from $125,000 to $150,000 completed, and will average 3½ months elapsed drilling time. An Ellenburger completion and a 2¼-mile southeast extension that is awaiting completion after logging more than 200 feet of effective saturation in Ellenburger dolomite overshadows the Devonian in importance. Completions in the latter horizon will cost from $175,000 to $200,000. The absence of the Devonian chert section within the Ellenburger producing area affords a substantial saving in rock bits and drilling time.

Current field operations consists of 20 active tests; 3 derricks and rigs; and 10 locations slated for immediate drilling. In the event of successful completions these will require more than a score of required offsets. Eleven additional offset and diagonal offset locations to the 8 producers must be drilled promptly to satisfy royalty owners, since 40-acre well spacing is uniformly observed. An unsuccessful attempt was made by a minority group of operators to have the Texas Railroad Commission adopt 80-acre drilling units at field hearing late in May. The plea may have been influenced by the apparent lack of pore space in the Devonian pay, which has not been produced sufficiently in the district to arrive at accurate calculations on oil recovery per acre.

Anticlinal Feature

Subsurface information gained from old failures drilled to the San Andres and geophysical surveys established a pronounced anticlinal feature trending northwest-southeast across the west portion of Ector County. Acquisition of lease protection against future deep explorations began in 1939 at prices ranging from $7.50 to $10 per acre. Interest was stimulated when the Wheeler field was discovered on the Winkler-Ector County line in July, 1943.

Shell Oil Company contracted to give Ector County, which has a higher percentage of productive acreage from the Permian than other counties in the district, its first Ellenburger test by purchasing one-half interest in a portion of Cities Service Oil Company's acreage. The partnership's exploratory test on the Texas Pacific Land Trust 80-acre lease, C SE SE T&P Ry. 7, Block 45, T-1-S, was staked in October, 1943, but drilling did not get underway until the following May. This location is 3⅝ miles northeast of the Wheeler field, which produces sour crude from the 8500-foot Devonian, and sweet oil from the 10,600-foot Ellenburger. Nearest Permian production involves the Goldsmith field, situated 5 miles east.

The prospect registered unusually high structural position upon leaving the San Andres beds, correlating 697 feet high on the Devonian, topped at 7860 feet with elevation of 3339 feet. Commercial production from the Devonian was confirmed by drill-stem tests. More pronounced structural relief was noted in entering the Silurian at 8590 feet, or 742 feet high to nearest Wheeler field producer. Drill-stem test of the Silurian at 8800-8847 feet yielded gas at rate of 1,584,000 feet daily. Second test at 8848-90 feet returned 4970 feet of 31.8-gravity oil and 1730 feet of salt water. Ellenburger was topped at 9980 feet, or 802 feet high, carrying an abundance of water without shows in drilling to 10,181 feet.

Stock Market Abbreviation

Failure of the Ellenburger to produce under these conditions provided a temporary setback on price bids for acreage. With 5½-inch cemented at 8995 feet, Silurian perforations at 8810-20 feet tested 86 barrels of water and only 6½ barrels of oil testing 0.74 percent sulphur on 24-hour swabbing test after treating with acid. The gas evidenced on drill-stem test was not revived by this operation. However, the Devonian fulfilled its earlier outlook for commercial production in recording a potential of 1911 barrels of 41-gravity pipe line oil, containing 0.55 percent sulphur content, with gas-oil ratio of 873/1, through ½-inch choke on January 3, 1945, after using 1000 gallons of acid. Production is from 536 perforations at 7886-8020 feet, having plugged back to 8950 feet. The bonus allowable is 120 barrels daily per calendar month.

Since the area is primarily open ranch country and removed from any designated town, the name TXL is derived from the stock market abbreviation of the Texas Pacific Land Trust's listing.

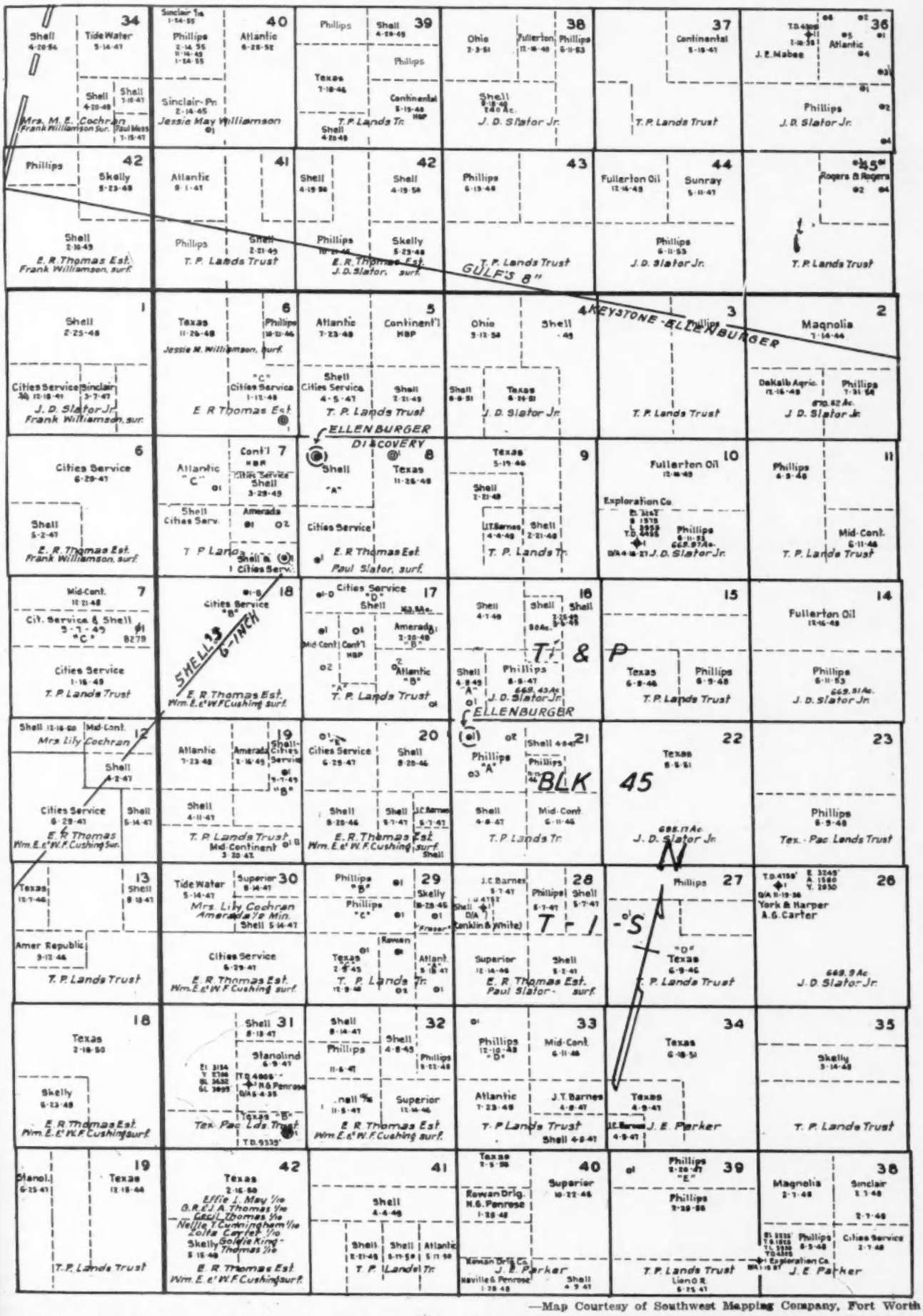
Competive bidding for the comparatively small amount of unleased acreage near the TXL test broke loose in October when flowing production became assured from the Devonian. Five deals requiring outlying tests were made by the Texas Pacific Land Trust, which has a policy of holding open some acreage around a wildcat on or near its holdings until it is proved, or semi-proved. The firm also retains one-sixth, instead of the customary one-eighth royalty, on most transactions of this kind. This accounts for the rapid spread of development, although short-term leases forced 2 others.

Owners of the discovery assumed 2 drilling obligations in acquiring lease on

Summary of TXL Field's Operations

OPERATOR	Producers	Drilling	Derricks and Rigs	Locations	Required Locations*	Totals
Amerada Petroleum Corporation	1	1	1	....	1	4
Atlantic Refining Company	....	3	1	....	1	5
Cities Service Oil Company	1	2	....	2	2	7
Cities Service-Shell	....	....	....	....	....	1
Continental Oil Company	....	....	....	1	1	2
Mid-Continent Petroleum Corporation	1	2	....	2	....	5
Phillips Petroleum Company	1	4	....	2	....	7
Phillips-Mid-Continent	....	1	....	1	....	2
Rowan Drilling Company	1	1	....	....	....	2
Shell Oil Company	1	....	1	1	2	5
Shell-Cities Service	2	1	....	1	3	7
Sinclair Prairie Oil Company	....	1	....	....	....	1
Skelly Oil Company	....	1	....	....	1	2
The Texas Company	....	3	....	....	....	4
Totals	8	20	3	10	11	54

* Undrilled offsets and diagonal offsets that must be drilled immediately.
One failure each has been recorded by Cities Service-Shell and The Texas Company.



—Map Courtesy of Southwest Mapping Company, Fort Worth

The TXL multi-pay deep area, Ector County, is rated as the most important strike of the year in West Texas, having a parallel belt of Devonian sweet crude production along the southwest flank of a sharp Ellenburger high. More than 100 proved locations are to be drilled, while the northwest-southeast strike is open for extensions.

163 acres in Section 19, Block 45, and the S½ of N½ Section 19, Block 46, paying $100 per acre cash and $3500 per acre, payable from ¼ of the 5/6 working interest. Phillips Petroleum Company strengthened its position in acquiring the NW¼ Section 33; NW¼ Section 21; and the west 120 acres of N½ of N½ Section 29, all Block 45, at similar terms. Each lease required the starting of an 8000-foot test prior to May 1. These prices have not been equalled by later deals.

Largest Devonian Producer

The TXL area became the largest Devonian producing area in the state when the second test extended production 2⅞ miles southeast. This outpost involved the Rowan Drilling Company's T. P. Land Trust 1, situated on an 80-acre lease due to expire May 17, 1945. The well flowed 2782 barrels of 42-gravity oil, gas-oil ratio of 1195/1, on potential gauge April 11 from perforations at 7826-7916 feet. The Devonian was entered at 7826 feet with elevation of 3258 feet, correlating 47 feet low to the discovery. It is credited with 80 feet of effective pay. Bottom-hole pressure test at 7919 feet registered 3155 pounds per square inch, while temperature was 126 degrees. Sample perforations at 7920-55 feet and below the pay indicated by electric log failed to yield oil or water after acid treatments. The producing perforations were washed with 1000 gallons of acid solution, but this flushing was not needed to attain natural flow.

Amerada Petroleum Corporation's T. P. Land Trust 1-A, northwest offset to the discovery and 32 feet low on the Devonian, flowed 1435 barrels of 40-gravity oil with gas-oil ratio of 1375/1 through ½-inch choke after washing perforations at 7895-8042 feet with 500 gallons of mud acid. Flowing pressure on tubing receded to 200 pounds and closed in casing pressure was 800 pounds. This most northwesterly Devonian well was completed in 3 months and 7 days, with 5 days delay due to casing trouble.

Shell Oil Company's Thomas 1-A, C NW NW Section 8 and ¾-mile north by east of the discovery, scored a temporary adverse development in failing to produce from the Devonian, topped at 7860 feet, or 5 feet low. Upper markers had confirmed its high structural position. The log revealed that the Upper Devonian section had been subjejcted to erosion, and that the hard chert beds were comparatively thin. Deeper drilling revealed possible oil production in the Silurian at 8504-60 feet, with oil and probable formation water at 8560-8610 feet. Ellenburger was entered at 9695 feet, or 280 feet high, resulting in a natural flow of 1547 barrels of 44-gravity sweet crude, with gas-oil ratio of 1192/1, on potential test through ½-inch choke from open hole at 9705-9852 feet. Casing pressure dropped from 1300 to 1150 pounds and tubing pressure receded from 1300 to 800 pounds during the official gauge. This new pay discovery earned a bonus allowable of 200 barrels daily per calendar month.

Apex of Structure

The apex of the TXL structure was shifted from the Ellenburger discovery 2¼ miles southeast when Phillips Petroleum Company's T. P. Land Trust-Phillips 1-A, C NW NW Section 21, entered partly eroded Devonian at 7768 feet with elevation of 3292 feet. Two drill-stem tests between 7760 and 8012 feet failed to yield oil, gas or water in the Devonian. This outpost entered the Silurian at 8420 feet, or 125 feet high to the discovery, and flowed oil at rate of 60 barrels hourly through tester at 8420-71 feet. Drill-stem test at 8468-95 feet returned gas to the surface within 55 minutes, with drill-pipe yielding 90 feet of oil- and gas-cut mud and 270 feet of free oil. Later test at 8495-8544 feet showed only 30 feet of drilling fluid.

Having confirmed commercial production from the Silurian, Phillips Petroleum Company proceeded with original plans to explore the Ellenburger, which was entered at 9610 feet. This correlates 323 feet high to the Devonian discovery and 43 feet high to the Ellenburger strike. Flowing production was developed on drill-stem test at 9597-9640 feet. The well flowed 131 barrels of 42.3-gravity sweet crude, with gas-oil ratio of 1115/1, in one-hour during test at 9640-9700 feet. Shut in bottom-hole pressure was calculated at 4100 pounds per square inch. The production flow was repeated at 9774-9800 feet. Final test at 9825-9853 feet yielded gas within 40 minutes followed by the recovery of the 1800-foot water cushion; 300 feet of oil and 1000 feet of sulphur water. This test establishes the water table at from 215 to 243 feet in the Ellenburger pay. Pipe was cemented at 9851 feet to complete through perforations.

Occupying the same relative position as the Ellenburger discovery and the pending outpost completion, Sinclair Prairie Oil Company's Williamson 1, C SE SW Section 40, Block 45, and 2⅜ miles north by west of production, topped Devonian at 7883 feet with elevation of 3330 feet. This correlates flat with nearest Devonian producer, and 17 feet low to the Ellenburger discovery. Drill-stem tests at 7940 and 8029 feet yielded slightly gas-cut mud.

Narrow Barren Strip

Productive limits of the TXL field will eventually extend beyond the Williamson outpost, but this particular location may be situated as to miss both the Devonian and Ellenburger due to the former being subjected to erosion on top and too low to find Ellenburger pay above the water table. The possibility of a narrow barren strip prevailing between the Devonian and Ellenburger areas was revealed when Cities Service Oil Company's Thomas 1-A, ¼-mile east of the Devonian discovery, flowed 122 barrels of 38.6-gravity oil, plus 7 percent acid residue, on potential gauge through ¾-inch after using 9500 gallons of acid through perforations at 7870-8030 feet. The Devonian was entered at 7867 feet, or 10 feet low. The small oil flow is attributed to the absence of the top section of the Devonian.

Development of the TXL structure has revealed that the Devonian production is confined to a truncated condition, averaging a mile in width along the southwest flank of a steep Ellenburger high. Its limitations became known when The Texas Company's T.P. Land Trust 1-A, 1½ miles southwest of the Rowan Drilling Company's outpost producer, abandoned at 9339 feet after entering the Devonion at 8095 feet, or 380 feet low. The sharpness of the dip in the Devonian was further emphasized when Cities Service Oil Company and Shell Oil Company's T.P. Land Trust 1-C, 1⅛ miles southwest of their Devonian discovery, entered the Devonian at 8205 feet, or 336 feet low, then abandoned at 8279 feet.

Whether the Devonian is present, or if it will produce on the northeast flank of the Ellenburger high is a matter that remains for the drill to determine. Ultimate crude yield per acre from the Devonian is highly speculative. There are six Devonian producing areas in West Texas, all found within the past 10½ months, while this zone is present but not produced in the Keystone field. An arbitrary minimum of 100 barrels of oil per acre-foot is generally considered a fair forecast. Using this minimum estimate the 7 Devonian wells, including the near-marginal discovery offset, have perforated sections opposite the De-

• CONTINUED ON PAGE 42

Completions in TXL Field

Ellenburger Well

OPERATOR	Elevation	Top Ellenburger	Producing Horizon	INITIAL FLOW		Choke
				Barrels	GOR	
Shell Oil Co.'s Thomas 1-A	3334	9695	9705-9852	1547	1192/1	½

DevonianWells

OPERATOR	Elevation	Top Devonian	Producing Horizon	INITIAL FLOW		Choke
				Barrels	GOR	
Amerada's T. P. Land Trust 1	3340	7893	7895-8042	1435	1375/1	½
Cities Service Thomas 1-A	3336	7867	7870-8030	122	1423/1	¾
Mid-Continent's T. P. Land Trust 1-A	3334	7852	7910-90	940	1544/1	½
Phillips Pet.'s T. P. Land 1-B	3307	7826	7930-80	495	*	½
Rowan Drilling's T. P. Land 1	3258	7826	7826-7916	2782	1195/1	½
Shell-Cities' T. P. Land Trust 1	3339	7860	7886-8020	1911	873/1	½
Shell-Cities' T. P. Land Trust 1-B	3330	8010	8005-90	1988	.....	½

* Official gauge pending.

TXL Field Failures

OPERATOR	Elevation	Top Devonian	Total Depth
Shell-Cities' T. P. Land 1-C	3348	8205	8286
The Texas Co.'s T. P. Land 1-B	3147	8095	9339

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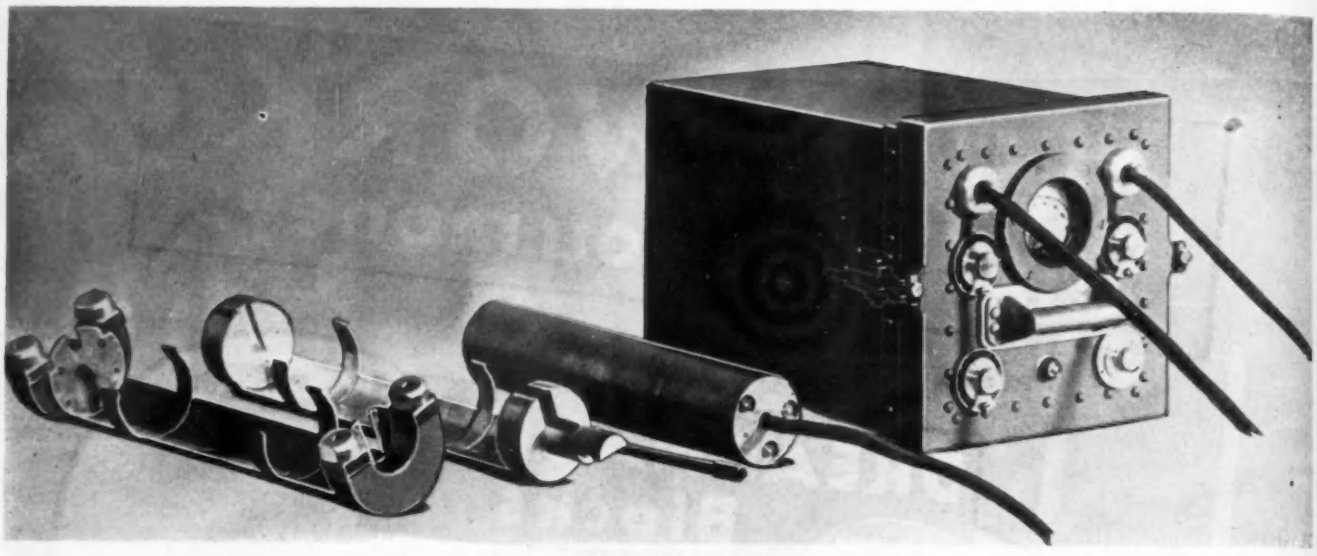
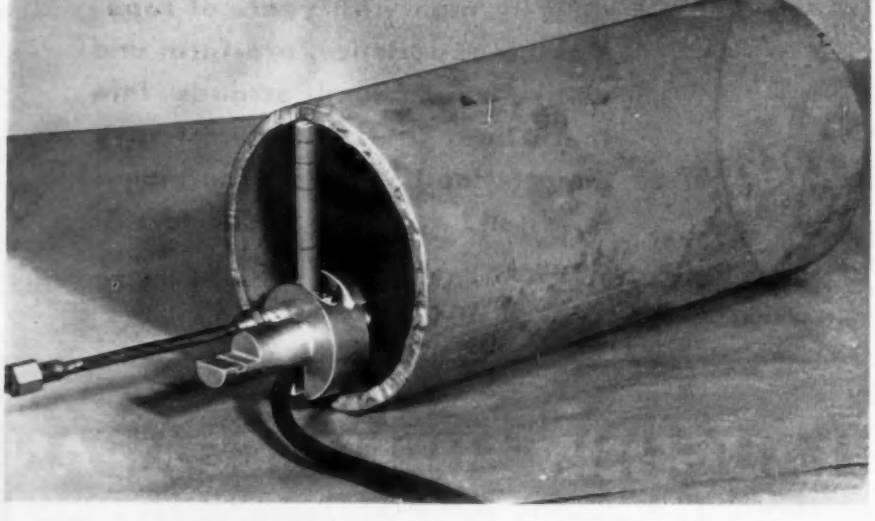


The penetron. External and internal head and control box.

The Penetron

New Gamma Ray Inspection Instrument Has Wide Application in Oil Industry

By DEAM W. GIVEN
Sales Manager, Engineering Laboratories, Inc.



Head in position for inside diameter measurement.

AN INSTRUMENT for measuring the density, thickness and other desired characteristics of materials by means of measurement of reflected gamma-rays has just been released to industry by the government under limited secrecy restrictions. This is the "penetron" developed by Dr. Gerhard Herzog, Texaco Development Corporation and production-engineered by Engineering Laboratories, Incorporated, pioneers in radioactivity well logging.

The penetron is an instrument which rapidly and accurately provides inspection data on lines, vessels and their contents without injury to the material being inspected and measures the thickness of any type of material. It also determines the density of liquids and locates liquid levels, or the interface between two immiscible liquids, without actual access to the interior of the containing vessel. These functions are accomplished rapidly with a high degree of accuracy by the use of penetrating gamma rays.

Until the advent of the penetron, all existing methods of inspecting materials have been either destructive of the materials being examined, have been time consuming, or have involved the use of extremely cumbersome equipment. For example, the determination of the thickness of walls of piping or vessels has meant the drilling of a hole into the structure and the use of mechanical calipers, or, in the case of heater tubes, has involved measuring the inside and outside diameters and from these measurements arithmetically determining the average wall thickness.

Overcoming Handicaps

In many instances certain parts of equipment may not be accessible and direct mechanical calipering is impossible at many inspection points because of their location. The determination of the wall thickness of a heater tube is a typical example. Here the method used involves separately determining the outside and inside diameters of the tube. The average wall thickness is the difference between these two values divided by two. This is by no means a true measure of the actual wall thickness since the inside of the tubing may be off

center with respect to the outside of the tube, and the actual wall thicknesses of diametrically opposite sides may differ to a considerable degree. Often it is found that although the average wall thickness is above the allowable minimum, the actual wall thickness of one side of the tubing may be well below this value. This, of course, introduces an appreciable risk and makes the operation of the heater unsafe. Up to the present time, determination of liquid density or determination of the location of liquid level has usually involved cutting into the wall of the containing vessel either for the purpose of installing mechanical floats or density measuring equipment. Difficulties are often encountered with equipment of this type in obtaining liquid-tight connections, particularly where moving mechanical parts must extend through the wall of the containing vessel. This is especially true where the containing vessel contains highly corrosive liquids or reagents and where the work involved in making the installation appears to accelerate the corrosive action of these materials.

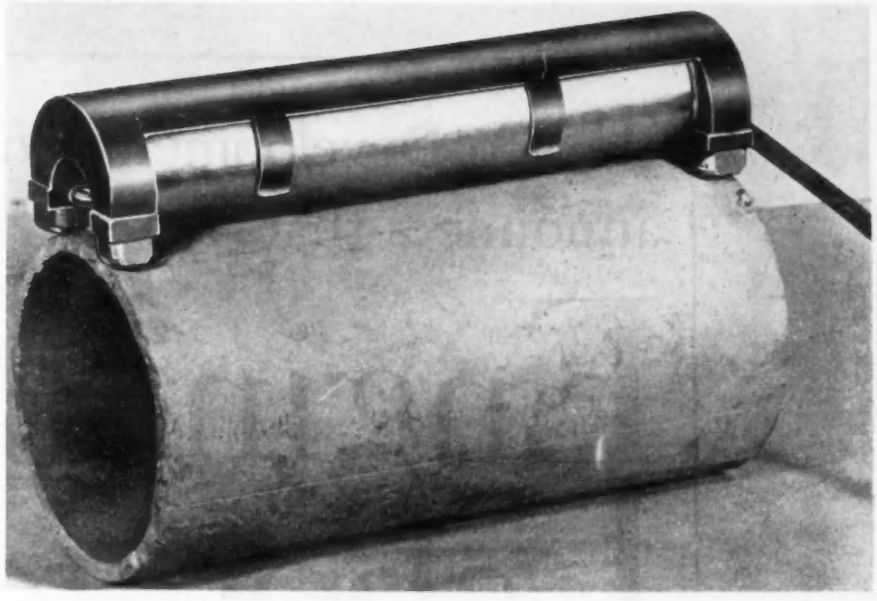
The penetron is ideally suited to the determination of fluid levels, the interface between two liquids, or the determination of densities, since, for its operation, it does not require access to the containing vessel. It need only be placed in position against the outside wall, from which point the necessary readings may be taken.

The source of gamma rays employed in the penetron is a needle containing 1 milligram of radium in the form of a commercially available salt. The source is surrounded with a shield containing a window which directs the beam of gamma rays in the desired direction. The thickness and design of the shield were arrived at after a careful study of the allowable dosages of gamma rays to which the average individual may be exposed without any physical effects. In this study publications of eminent physicists were consulted.

Principle of Operation

The simple principle upon which the penetron operates is illustrated diagrammatically in Figure 1. The shaded layers numbered 1, 2, and 3, represent adjacent layers of the homogeneous wall, the thickness of which is to be measured. Penetrating gamma rays emerge from a radioactivity source S. These rays impinge on the wall and penetrate into it. A portion of the rays pass through the wall and emerge on the opposite side. These rays serve no useful purpose and are disregarded. Another portion of the radiation is scattered in all directions by the electrons of the atoms which make up the wall. Some of these scattered rays emerge on the same side of the wall from which they originally entered. It is this particular portion of the radiation, termed back-scattered radiation, which is utilized in the penetron for measuring wall thickness.

By measuring the intensity of the back-scattered radiation, as by means of detector D, it is possible to determine the thickness of the wall, since for a wall of any given composition, the intensity of the back-scattered radiation increases as a direct function of the wall thickness. In order that this measurement may be made with a high degree of accuracy, it is necessary to set up the source of radiation, the wall and the detector in accordance with a predetermined geometric arrangement. It should be noted that the block SH, shown in the drawing, is employed as a shield to prevent radiation from the radioactive source falling directly on the detector D.



Head in position for outside diameter measurement.

The radiation picked up by the detector creates current discharges which are amplified and integrated to produce a direct current. The amount of current produced is measured by means of an indicating microammeter. The readings obtained on the microammeter, therefore, are directly indicative of the wall thickness.

Determination of Wall Thickness

In order to convert the reading of the microammeter into wall thickness in inches, the instrument is calibrated on specimens of tubing and flat plates having known wall thicknesses and from these data calibration curves are derived. Because the geometrical relationship between the measuring head and the wall changes with the curvature of the wall it is to be expected that the calibration curves for a wall of a given composition will vary depending on the diameter or curvature of the wall or vessel being measured, and on whether the measurements of curved surfaces are made from the outside or from the inside. Typical calibration curves for measurements on iron plate and outside measurements on iron tubing are shown in Figure 2. Corresponding calibration curves for inside measurements on iron tubing are shown in Figure 3. These curves have to be established only once and are furnished with the instrument. The curves are not affected by small changes in the chemical composition of the material comprising the wall. For example, the calibration curves shown in Figures 2 and 3 for iron also apply to alloyed steeels. If, however, other materials like aluminum, brass, wood, ceramics, plastics, etc., are to be measured, different calibration curves must be employed. Typical calibration curves for flat plates of aluminum, wood bakelite, iron, and lead are shown in Figure 4.

Wall thickness measurements can be made on pipes or vessels which contain fluids, provided a correction is made to take into account the influence of the fluid on the reading of the instrument. The magnitude of this correction is dependent upon the density of the fluid, but for practical purposes the necessary

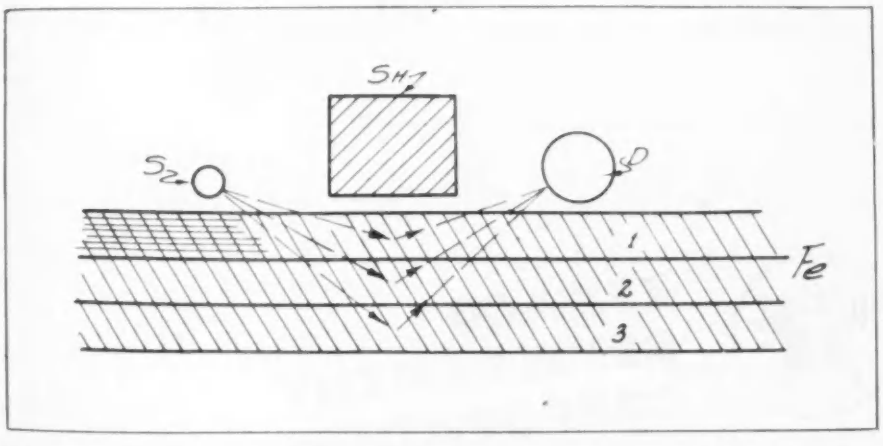


FIGURE 1. Diagrammatic illustration of the principle involved in the operation of The Texas Company penetron.

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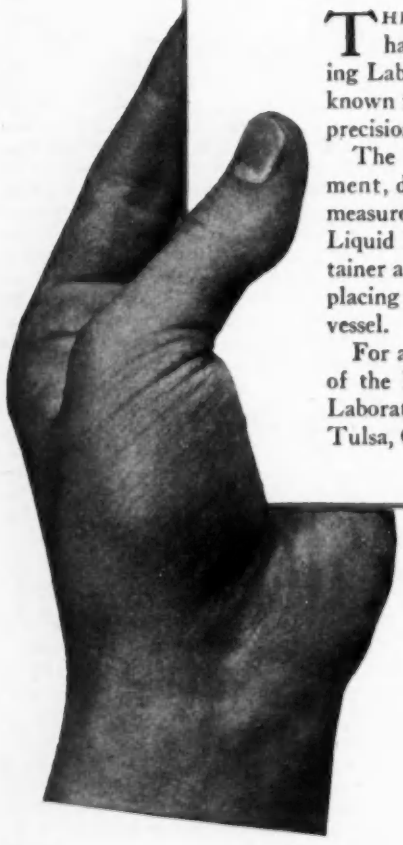

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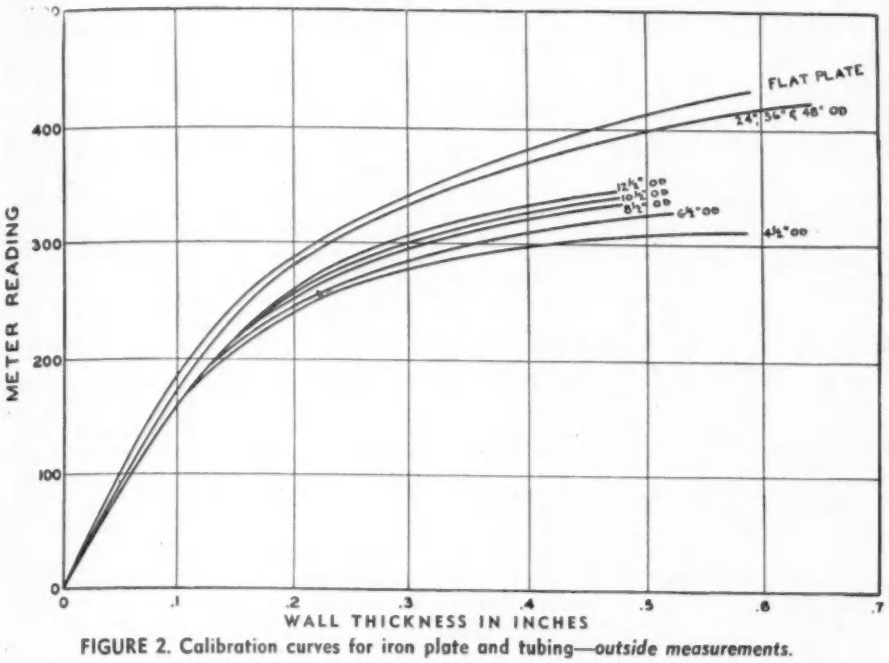


FIGURE 2. Calibration curves for iron plate and tubing—*outside measurements.*

correction can be made simply by establishing a calibration curve for pipes of known wall thickness filled with the same fluid.

An example of the type of information which can be obtained by means of the penetron is illustrated in Figure 5. This figure shows actual measurements made with the penetron on a large surge drum. Contours are drawn through points of equal wall thickness.

Limitation and Accuracy

Referring to Figures 2, 3, and 4, it will be seen that the calibration curves for the instrument have a rather steep slope for the smaller wall thicknesses but tend to flatten out with increasing wall thickness. From these curves it will be seen that the penetron can be used for measuring iron or steel walls up to approximately 0.75 inch thickness. For other materials the limit is different, for example, for aluminum the limit is approximately one inch. This limitation is due to the fact that the penetrative power of deflected or scattered gamma rays is less than that of the primary rays, and rays which are deflected beyond a certain depth are completely absorbed before reaching the surface as back-scattered radiation.

The individual pulses of current created in the detector do not follow each other at regular intervals. In fact the rate of emission of gamma rays by radium is quite irregular. It follows certain statistical laws and fluctuates around an average value. The accuracy with which this average value can be determined experimentally increases as the time of observation is increased. Considerations along these lines lead to the establishment of a minimum time for any measurement in radioactivity in order to achieve a required accuracy. In the case of the penetron the minimum time for each reading is 25 seconds. In actual field work it has been found that it is easily possible to make measurements at 150 or more points during a working day.

Determination of Liquid Level

The penetron accomplishes its various functions by accurately measuring the amount of back-scattered radiation. If the head of the penetron is placed on the wall of a vessel partially filled with liquid and above the level of the liquid, the amount of back-scattered radiation

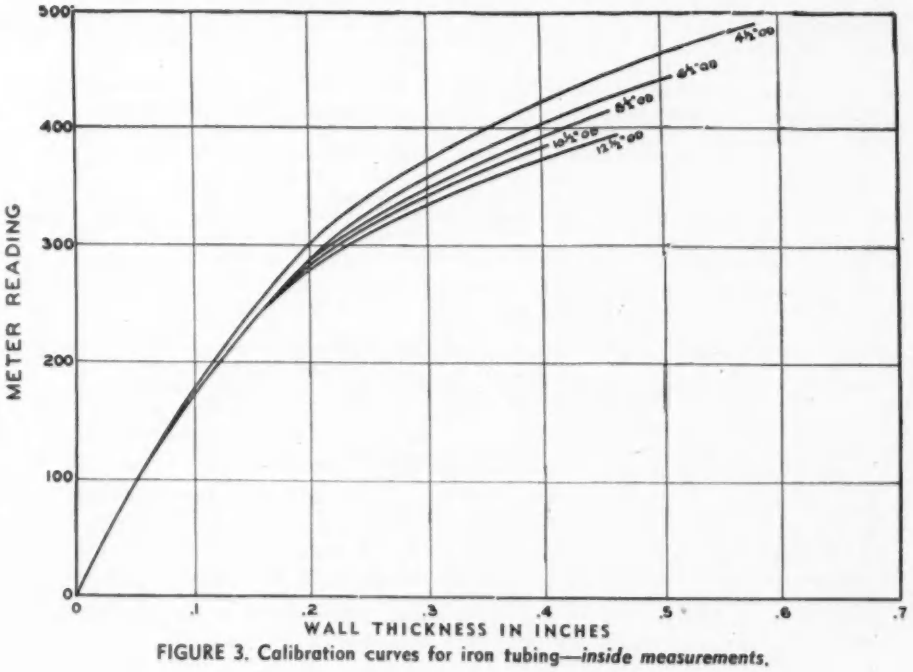


FIGURE 3. Calibration curves for iron tubing—*inside measurements.*

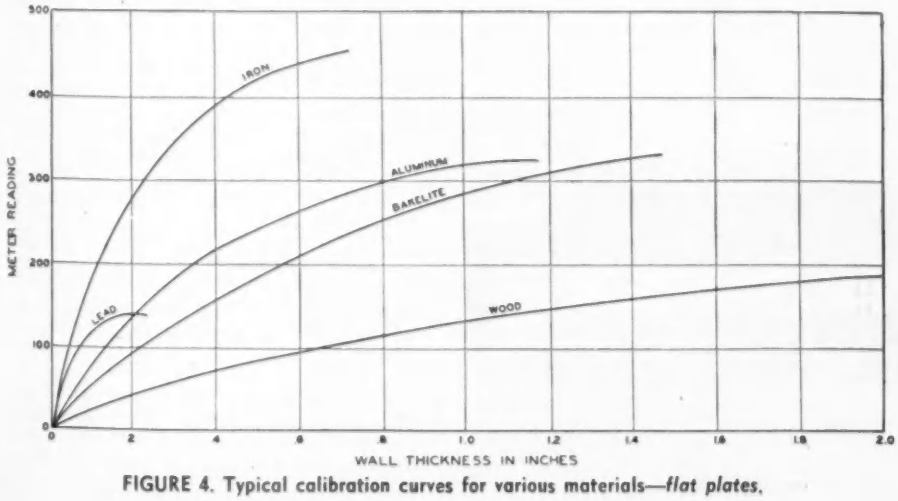


FIGURE 4. Typical calibration curves for various materials—*flat plates.*

will be due entirely to the wall of the vessel, since the density of the air or vapor in the vessel is substantially negligible by comparison with the density of the material comprising the wall. If the head is moved down along the wall of the vessel the reading of the instrument will remain constant until it reaches a point opposite the level of the liquid in the container. At this point the meter of the instrument will indicate an increase in the amount of back-scattered radiation, due to the fact that the radiation passing through the wall is scattered not only by the wall but also by the liquid in the vessel. By noting the point on the wall of the vessel at which an increase in the reading of the instrument is obtained, it is possible to locate the level of the liquid quite accurately. Likewise, the interface between two fluids of different densities can be located easily and

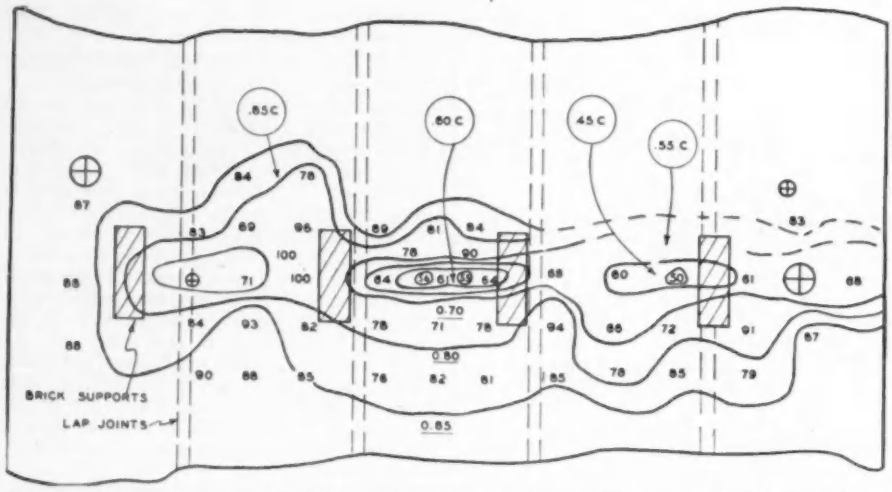


FIGURE 5. Surge Drum—wall thickness measurements. *Bottom of drum as seen from inside—measurements made from outside. Figures show measured wall thickness in hundredths of an inch.*

accurately from the outside of a container without actual access to the interior of the container.

By proper instrumentation the penetron may be adapted to control as well as to locate liquid levels. In addition a continuous record of the location of the levels may be obtained by employing a recording device. The following are a few specific examples of some of the types of liquid level measurements which may be made with the penetron:

Gauging liquids in storage tanks.
Gauging diluefied gases in cylinders.
Controlling levels in process units, such as the solvent-oil-interface in a solvent refining tower.
Determining and controlling the catalyst level in catalyzed chemical reactions.

These constitute only a few of the many possible applications.

Determination of Specific Gravity

All penetrating radiation is to a certain extent scattered or diffusely reflected by the material it traverses and the degree of scattering is a function of the number of electrons encountered by the penetrating rays in their passage through the material. Since the total number of electrons present in a unit volume of any substance is closely related to the density of the material increases the amount of back-scattered radiation detected by the penetron also increases and for practical purposes the penetron measures density. For this reason, the density of a fluid inside of a container may be determined directly without actual access to the fluid itself. In actual experimental work employing a penetron situated on the outer wall of a container having a wall thickness of 0.3 inches, it was found possible to check the specific gravities of fluids having values of between 10° Baume and 75° Baume with a high degree of accuracy, values obtained by the penetron checking very closely with gravities obtained on the fluids by conventional methods.

The following are given as a few typical examples of measurements which may be made based on the determination of the specific gravity:

Specific gravity of liquids in tankage.
Routing the flow of oil in pipe lines.
Control of blending operations in which two materials of different densities are mixed.
Determination and control of proportions of reactants in chemical processes.

In addition, numerous other applications are possible, particularly wherever it is desired to determine the density of a substance without the necessity of sampling or without actual access to the material.

Versatility of the Penetron

Since the measurements obtained with the penetron are largely based on density, it is obvious that this instrument may be employed for a large variety of different purposes. The applications of the penetron to the determination of liquid level and the determination of the specific gravity of fluids have been discussed in the preceeding sections. In addition, the penetron may be used for controlling operations involving certain chemical reactions. It also has numerous other uses which are being given consideration.

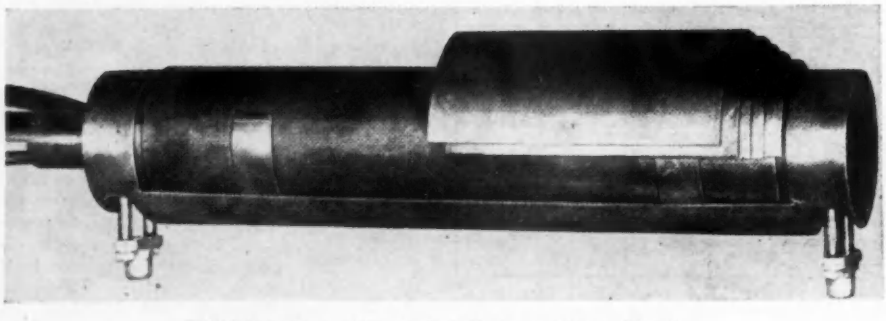


FIGURE 6. Concentric steel shells for routine calibration.

TXL Field

■ CONTINUED FROM PAGE 36

vonian for an average of 92 feet, or 9200 barrels per acre recovery.

No Pressure Drop

The Devonian is primarily a hard chert section that is difficult to drill, or core. Formation samples have not been sufficient to ascertain reliable figures on porosity and permeability. The discovery and later completions have not reflected any appreciable drop in bottom-hole pressure, although produced at a flat allowable of 180 barrels daily.

The Ellenburger horizon has not been explored sufficiently to determine whether its productive limits will be confined to a narrow belt, or if it will parallel the Devonian with a greater width. The Texas Company has started a ½-mile east outpost to the deep discovery, but it will not be completed until November, or December. Other lease owners are content to confine their drilling along the projected trend. A minimum of 20,000 barrels per acre recovery is anticipated for the average-pay thickness Ellenburger wells.

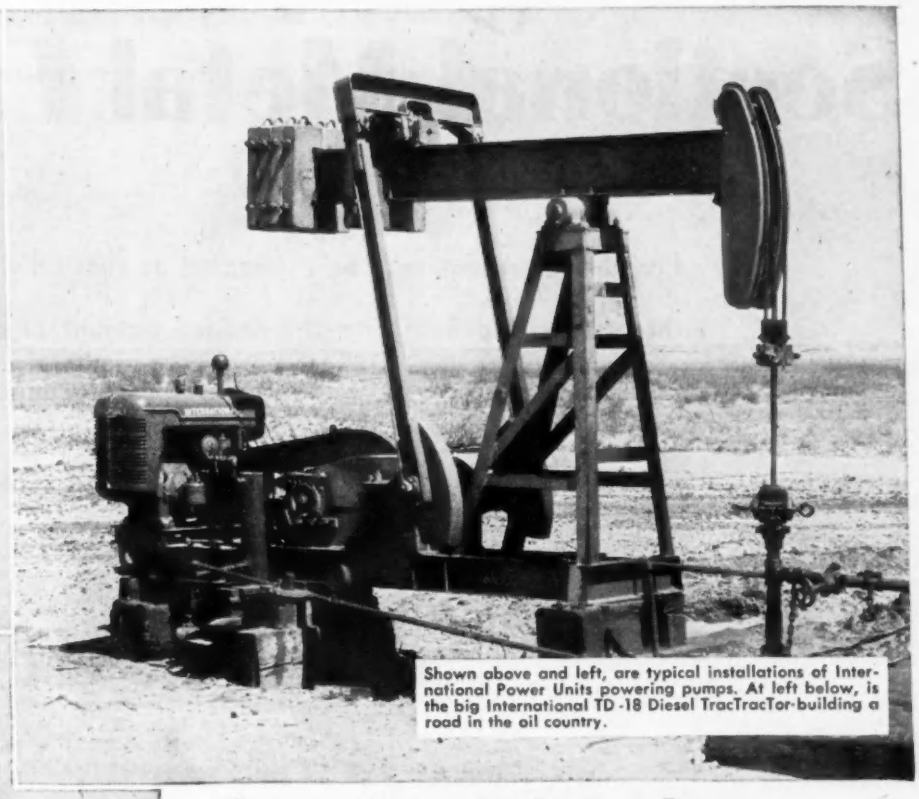
All drilling in the TXL field is by contract. The prevailing price is $9 per foot to 7000 feet with the contractor furnishing the derrick, cellar, pits and the required bits. Operator provides the fuel, water and mud. It is routine drilling to this depth, although predominately hard lime.

Below 7000 feet the contractor goes on day-work basis that progressively increases at 1000-foot levels. Operator bears the cost of the bits, requiring 50 to 60 to negotiate the Devonian section. The prevailing day-work scale is $700 per day from 7000 to 8000 feet; $750 per day from 8000 to 9000 feet; and $800 per day from 9000 to 10,000 feet. However, the rate is $100 less on days that drill-pipe is not in service. The over-all cost of completeing Devonian wells ranges from $125,000 to $150,000, while preliminary figures on Ellenburger completions indicate a cost range of $175,000 to $200,000. All Devonian wells have been completed through casing perforations.

Casing program consists of a combination of 16-inch at 220 feet and 10¼-inch at 3600 feet, or 13-inch and 9⅝-inch at same levels. Majority of the completions have used 5½-inch for the oil string, but 7-inch will become more popular in the Ellenburger area, if the Silurian is also tapped for dual completion.

Pipe line outlet is restricted to a 6-inch operated by Shell Pipe Line Company via the Wheeler and North Monahans fields, both producing sweet crude from the Ellenburger, to its Monahans main line station. This line will soon be at capacity load, and other facilities must be provided. Gulf Refining Company's Keystone-Ellenburger to Goldsmith station 8-inch line crosses the upper portion of the TXL structure, but will soon have its capacity load of 25,000 barrels daily utilized with premium quality oil from the Keystone deep pay. Standish Pipe Line Company, subsidiary of the Phillips Petroleum Company, will likely enter the TXL field through an extension of its gathering system now serving the Goldsmith field. The latter operates an 8-inch line from the Embar 2-pay field, Andrews County, to its Goldsmith terminal, and the runs from both fields are turned to Gulf for delivery to distant refineries.

Low-Cost Power...



Shown above and left, are typical installations of International Power Units powering pumps. At left below, is the big International TD-18 Diesel TracTracTor-building a road in the oil country.

for the Oil Industry

• Skilled design, quality materials, and precision manufacture combine to assure low-cost operation and maintenance of International TracTracTors, Power Units, and Industrial Wheel Tractors.

International Power Units are available in four carburetor models and four Diesel models. The carburetor-type power units operate on gas as well as gasoline. International TracTracTors, full-Diesel and carburetor type, are powerful, rugged crawlers which have proved their dependable performance everywhere and have been doing a great job on the war fronts. Industrial Wheel Tractors are built in Diesel and carburetor models for a wide variety of work.

Put International Power to work and take advantage of its many money-saving features. The International Industrial Power Distributor or dealer will supply complete information and stands ready to supply genuine parts and skilled maintenance service. He can also help make application for urgently needed power.

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BUY MORE WAR BONDS AND KEEP THEM

INTERNATIONAL Industrial Power

Sectional Metal Enclosure

Prefabricated unit may be assembled as roof only, or any of the three sides added to give the desired amount of closure around the engine and provide weatherproof space for maintenance work

SHELTER for the power plant of the rig is considered a necessity on all but jobs where a turn-around of only a few days is expected. The gain in power output alone during the winter months more than returns the investment made for housing the engines. This shelter may range from a light corrugated-iron roof with detachable canvas curtains to a welded steel structure which is as permanent as any rig equipment—but which frequently runs into additional hauling costs which add to drilling costs without making adequate return.

One contractor, working in conjunction with a manufacturer of oil-well supplies, has developed a type of engine house which is readily transported, easily assembled, and adaptable to varying climatic conditions.

Standardized Panels

The house is designed to require standardized panels, each of a size and weight to be readily handled by one man. These panels are bolted to equally spaced studs or standards, extending around the outside of the engine platform and serving as supports to the roof trusses.

One end of each roof truss is carried in a socket of the header, this member being bolted outside the derrick above the lower girt on the drawworks side. This header is made in two parts, so that it may easily be positioned with the derrick line and attached to the derrick legs by U- or J-bolts without requiring special lifting equipment. Paired ears, evenly spaced across the span, are made to fit the ends of the roof trusses, with holes which match with the truss ends to provide easy assembly.

Each roof truss is structurally designed and braced to be amply strong to carry the roof and any normal superimposed load between the derrick header and the outer edge of the floor area. The truss is triangular or wedge-shaped, tapering to a point at the outer end, where it is supported by the top of the steel studding. The trusses are placed with the derrick line, the header end being first lifted into place, and secured with a bolt through the ears and the eye at the end of the truss. The outer end is then raised, pivoting on the header bolt as lift is applied, until it will clear the outer support. Transverse braces, bolted to the cross members of the trusses, provide against side sway and unite the members into a stable assembly.

The roof panels, overlapping at the ends in a manner similar to shingles or steel roofing, are then placed over the trusses, being bolted in place through the edge of the upper angle of the truss. Where overhead shelter alone is required, the job is then completed by stringing the safety chain between the uprights and bolting cross braces to relieve them of side stresses.

Erection of the engine house may be carried out with the winch truck if the power on the cat-head is not yet ready, or it may be put up by the drilling crew while actual drilling is being done, with the cathead turning steadily and power taken from it as needed by increasing the wraps on the head.

After the header beam is put in place, the assembly is progressive. First the end truss, with its wedge-shaped panel incorporated, is put up on the side farthest from the spot where the material is unloaded. The other trusses are put up in sequence, with the panel nearest the material platform going up last. In order to leave the space around the engine as free as possible while the relatively long and heavy trusses are being hoisted from the truck, the pinned end in the header beam only is located until all members are up on the floor.

Supports Installed

Then the outer supports, at the edge of the floor area, are put in with the outer panels being brought to height first, and the center ones last, so as to avoid working over units already set.

Laying of the roof section follows the stringing of the transverse bracing units, and requires the services of only two men on the trusses, with a third at the cathead to bring the material up from the carrying skid.

Here is a valuable "How Article" that solves the triple problem of developing a type of engine house which is readily transported, easily assembled, and adaptable to any sort of climatic condition.

Side and end panels, if required, are placed after the material is brought up to floor level with the derrick line, the weight being so computed that no power is required for locating each unit as it is bolted to the vertical channel supports.

Being readily portable, the various units are easily painted while disassembled, and do not require a scaffold, bos'ns chair or other working support for maintaining in first-class condition.

Panels Secured

Where walls are required, it is necessary only to bolt the standardized panels between the uprights, using bolt holes which have been previously registered in the prefabrication stage, and carrying each panel up to the edge of the roof as a unit, entirely independently of adjacent sections. The outer sides of the trusses at the sides of the derrick floor are covered with metal, so that rectangular panels will fill all gaps, no matter what the location or side of the house.

Some of the standardized panels are equipped with hinged sections which may be raised from within, giving ventilation and also providing a means for inspecting the derrick surroundings from the engine-house floor. Other panels are equipped with a door, opening outwardly, which is located at the head of the stairs or ladder leading from the back of the engine space to the ground.

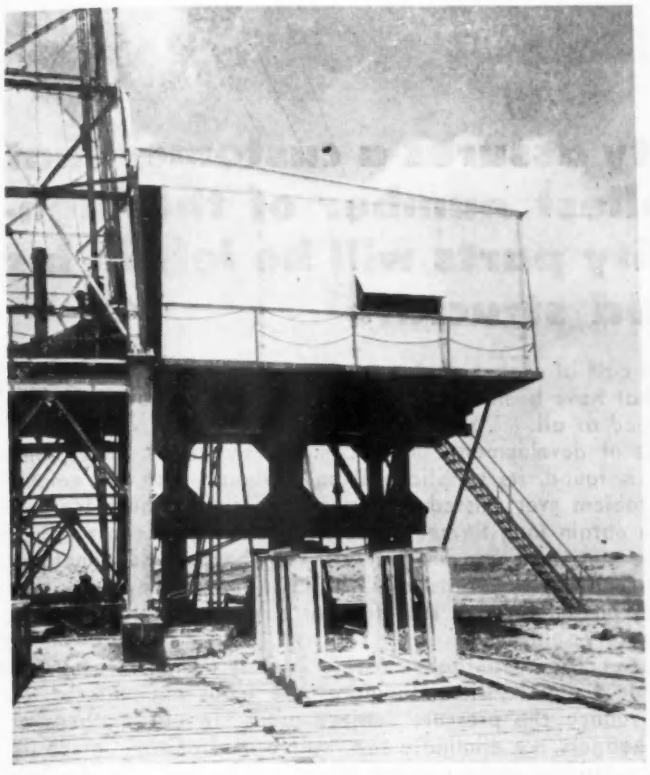
Aluminum Painted

Painted with aluminum, the inside surfaces of the house require relatively little artificial light to give good working conditions at night, the open trusses providing ample space for stringing any wires required, as well as affording wide choice of location for the fixtures themselves.

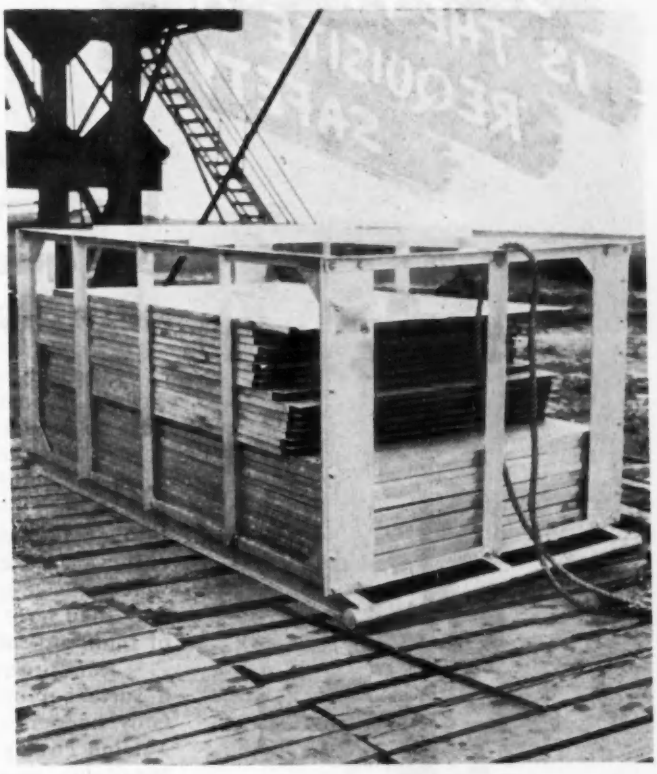
When the house is to be moved to another location, it is dismantled panel by panel, and the interchangeable units are stored in the specially fabricated carrying skid, where side braces and top members which are bolted down after the last of the units has been stacked prevent shifting or damaging of the panels during transfer.

Only the two end trusses are special, any one of the other four being interchangeable with its mates, as are all the uprights. It is therefore not necessary to dismount, load or unload the material in any special sequence to facilitate reassembly at the next location.

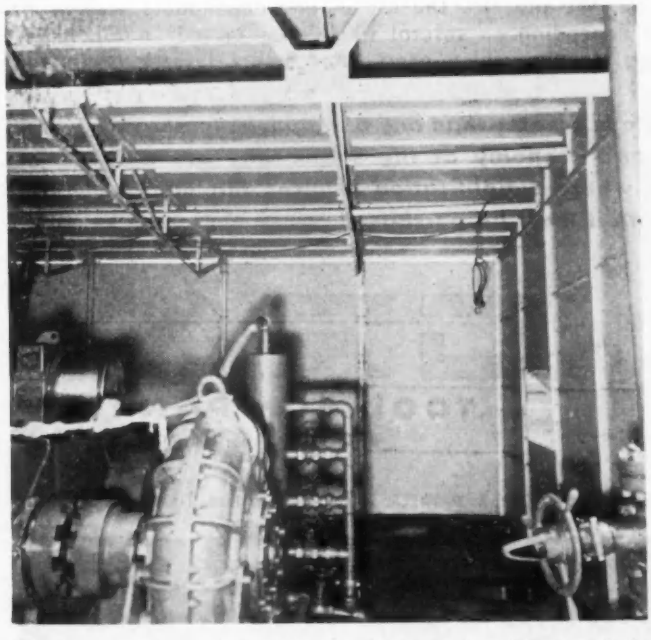
Protects Drilling Engine



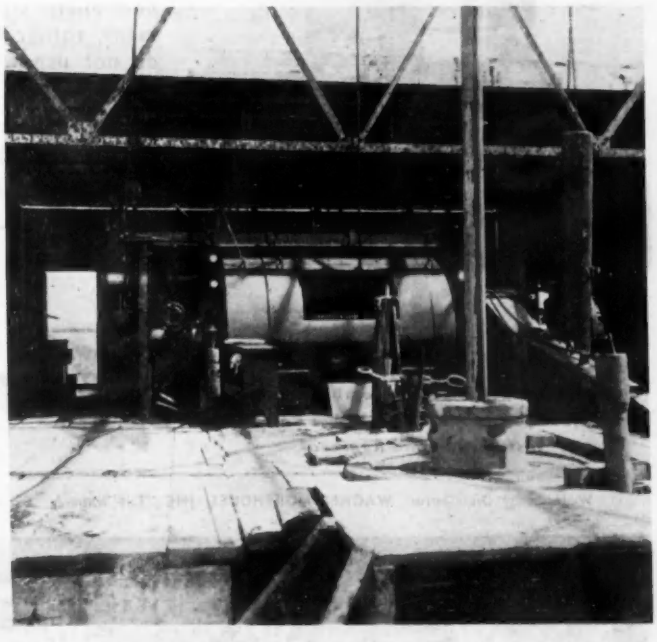
Unitized panels, bolted between uprights through prefabricated matching holes, form neat, sturdy and effective engine housing on this rig floor. The window panel and the one carrying escape door may be shifted as desired between studs, and any units may be left out completely if desired without weakening structure or affecting support of roof.



Stored in the special skid ready for transportation, the separate panels lie flat and are retained in place by tie angles bolted in place after storage is completed. One skid contains all the panels necessary for roof and three-sided engine enclosure.



One corner of the enclosure, showing the type of roof truss and the manner in which the outer end is supported on uprights, each of which may be placed under its corresponding truss without interference from the others, or affecting the stability of the shelter. The transverse tie angles midway of the vertical members of the trusses are evident, as is also the ease with which lighting circuits can be strung.



Looking from the derrick floor into the three-sided engine house, showing the header beam which is carried on the derrick beams. The light line which marks the junction of roof and rear panel assembly denotes the amount of headroom available at the edge of floor area.

SIMPLICITY IS THE FIRST REQUISITE OF SAFETY

Simplicity assures a customer that the smallest number of the highest quality parts will be left in his completed structure

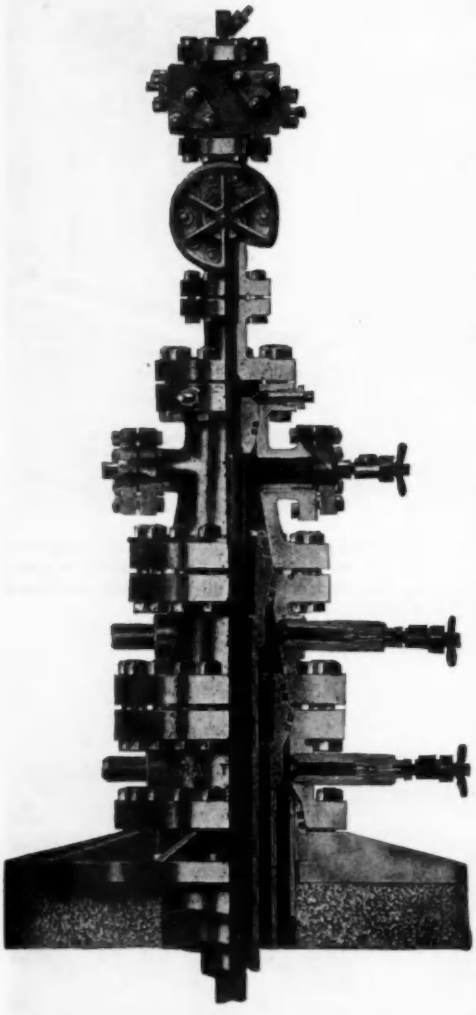


FIGURE 1A

Complete Well Head Assembly equipped with Composite Manifold, Valve Removal, Installation and Removal.

The increased cost of higher quality is offset many times through the savings in parts that have been eliminated, and in many instances do not have to be purchased at all.

In the process of development, many complex structures ensue, but, when the solution is found, its simplicity is so apparent that one quickly forgets that the problem ever existed. Experienced designers have learned, through failures to obtain long-termed trade acceptances, to control their enthusiasm over the merits of new designs until they have found something which measures correctly by the yardstick, SIMPLICITY, for they know that only then have they passed through the stage of development to the point of finding a satisfactory solution.

Here are some specific advantages existing in Gray designs. To remove a valve our method of equalization eliminates the loads encountered. In Gray hangers, we reduce the pressure subject areas. In our methods of welding casing to hangers, we eliminate the lever arm. In Gray Composite Manifolds, we concentrate a large number of parts into one. We, further, eliminate the flowing manifold, which reduces the dual outlets to a single flow line extending to the tank. In the nesting of casing strings, we reduce the size of control equipment, together with reduction in the size of casings. Likewise, the pressure subject areas exposed against connections are reduced. We do not leave short-lived temporary packing materials in the permanent structure. We practice the use of one dependable sealing element, rather than depending on several which may or may not hold. We do not use welding flanges, which exert unnecessary lever arms against the weld.

The whole is greater than any of its parts. Increased quality and economy at the same time are only possible where simplification reduces the number of parts that must be purchased.

THE WHOLE IS GREATER THAN ANY OF ITS PARTS

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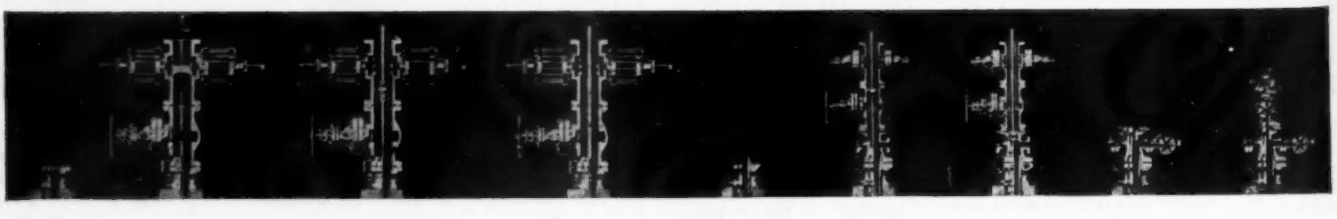
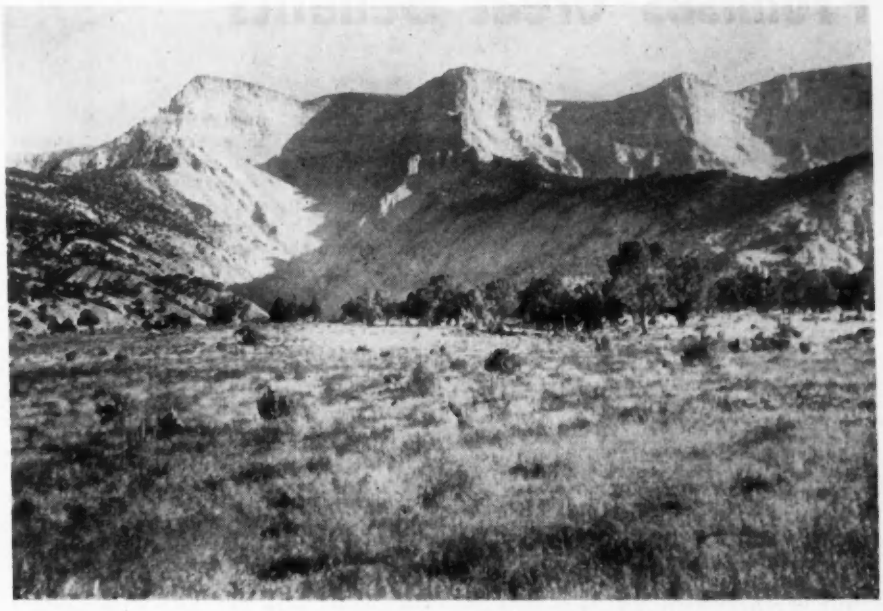


Casing Head Attached | Drilling | Running Casing | Casing Landed | Drilling Control Equipment Removed | Drilling-in and Running Tubing | Tubing Landed | Control Equipment Removed | Manifold Attached

U. S. Begins Oil-Shale Work

Back in 1925 to 1929, the Bureau of Mines operated an experimental oil-shale mine (one of old workings shown) and retorting plant at Rulison, Colo., near the site chosen for its new demonstration plant near Rifle. About 6000 tons of oil shale were mined and 3600 barrels of oil produced, but discovery of large new petroleum fields interrupted work before the possibilities of oil shale could be investigated thoroughly.



Now the Bureau is resuming its oil-shale research, with laboratories being built at Laramie, Wyoming, and a demonstration plant near Rifle, Colorado. To show how billions of barrels of oil can be squeezed out of these mountains of oil-shale rocks of Western Colorado, the Bureau has chosen this site to construct a $1,500,000 demonstration plant to serve as a proving ground for processes being developed to convert the nation's vast oil-shale beds into an auxiliary source of fuels and lubricants. The plant will be erected on the smooth surface of Black's mesa (foreground) and a 200-ton-a-day mine will be opened in the sheer sides of Anvil Points, oil-shale formations rising starkly against the skyline in the Naval Reserves near Rifle, Colo. Shales in these formations contain from 5 to 70 gallons of oil per ton of ore. An aerial tramway 1½ miles long will carry shale from mine to plant.

Before choosing the site for its new $1,500,000 oil-shale demonstration plant near Rifle, Colo., the Bureau of Mines of the Department of the Interior sent this crew of horse-borne engineers to survey the rugged terrain of Western Colorado. The site finally chosen was considered the best for the establishment of one of the major installations authorized by Congress in the Synthetic Liquid Fuels Act.

Wearing a helmet for protection against falling rocks and a visor to shield his eyes from flying chips, this Bureau worker is cutting a channel through an oil-shale bed with hammer and mail. Samples to the tested for oil content and processing characteristics fall into a canvas catcher.

—All photos by Acme Newspictures, Inc.

Bretton Woods Program Promises Great Benefits

INDEPENDENT producers and refiners as well as large oil companies are promised material benefits under the Bretton Woods program, which is expected to be approved by the United States Congress and also the other United Nations.

Advantages of the proposed international economic-financial program from the standpoint of the American oil industry, as well as for the whole nation, have been pointed out by the Business and Industry Committee for Bretton Woods, and are digested herewith:

The plan is aimed at establishing stability and order in international economic affairs and at the promotion of a large volume of international trade and investment in the postwar period.

The American oil industry will benefit, the committee declares, because it is a large exporter of petroleum, predominantly in refined form, and because it has large and increasing investments in oil fields, refineries, and distribution facilities abroad, mainly for serving foreign markets. In 1938 United States exports of petroleum products amounted to about $390,000,000, while imports amounted to a tenth of that sum. While imports consist largely of crude oil, the bulk of exports are processed products. In 1938 exports of kerosine amounted to 11 percent of our domestic production, exports of lubricating oil amounted to 30 percent, and exports of gasoline and other motor fuels 8 percent of domestic output.

Nation's Safeguards

The foreign oil properties of American companies not only represent potentially profitable investments for American owners but also are safeguards for the nation as resources that may be urgently needed in emergencies of peacetime or wartime. For whereas we have been producing and using about 60 percent of world petroleum production, we hold within the United States only about 35 percent of known world reserves. Under any necessity of increasing imports, the procurement of requirements would be facilitated through the Bretton Woods program, just as the marketing of exportable oils would be made easier.

Petroleum exports traditionally fluctuate with total exports, and vigorous international trade is required to stimulate our sale of surplus petroleum products abroad and thus to promote production and employment in our oil fields and refineries.

American-owned oil fields and refineries abroad largely find their markets in foreign countries, and unless such sales can be made, Americans will not be able to maintain and increase their foreign investments in petroleum reserves and facilities.

Prices of petroleum in the world markets in terms of dollars depend in part on values of foreign currencies. Unstable prices due to fluctuating exchange rates increase risks in international trade and discourage foreign investment. Maximum stability in the values of the world's currencies therefore is desirable for the petroleum industry, as an exporter, importer, and foreign investor.

Needless Discrimination

Also needed is the elimination of exchange controls and discriminatory exchange practices, through which some foreign countries in the past restricted American petroleum exports. American-owned oil companies also have been prevented by foreign exchange regulations from converting their profits into dollars, and such profits have lain idle for years in foreign blocked accounts. In some regions, such as the Middle East, American oil companies must sell their output in countries of the Sterling Area. These currencies must be convertible into dollars for American companies to pay expenses or dividends. Inter-convertibility of the world's currencies is highly important to success of the American petroleum industry at home and abroad.

Under the Bretton Woods program, international trade and investment would be promoted by two agencies, (1) the International Monetary Fund, and (2) the International Bank for Reconstruction and Development, both supported and managed by all the United Nations. However, both would be located in the United States, which would be the largest stockholder and which would control more votes in the management than any other country.

Functions of the Monetary Fund would include power to stabilize value of world currencies in terms of each other. Such stability would eliminate uncertainty concerning cost of foreign currencies needed to make purchases abroad or the dollar value of proceeds from sales abroad. The Fund meanwhile will seek early elimination of controls on exchange transactions and abolition of currency devices, such as Germany used to limit foreign trade and prepare for aggression. Maximum freedom would be promoted in buying foreign exchange to settle obligations abroad and in handling foreign currencies as to selling for dollars or spending abroad.

Principal Function

Primary function of the International Bank will be to guarantee foreign securities sold in the United States or any other country, in order to stimulate international investment and encourage foreign lending on the part of countries with capital to export. (Some countries of Latin America and the Far East, as well as war-torn European countries, require foreign capital for development of resources or for rehabilitation, to assure a peaceful and prosperous world.) The International Bank will guarantee the foreign securities only under three conditions: (1) that funds cannot be raised through usual investment channels on reasonable terms, (2) that the loan is for a project which will increase the income of the country in which such project is to be located, and (3) that the government of the country in question favors the project sufficiently to guarantee proper handling and full repayment of the funds involved in the loan. The International Bank will add its guarantee to that of the government concerned, and the securities will be marketed internationally. This procedure would reduce risks for individual investors and distribute the risk among the 44 member countries. And since the loans sponsored by the International Bank would be in addition to ordinary foreign loans otherwise made, there would be a resultant expansion of investment in many countries. These investments so promoted would involve expenditures in the United States and elsewhere which would create employment and increase production and exports.

If the Congress of the United States approves the Bretton Woods program, as it is expected to do, the approval of the other governments is assured.

API Bulletin Deals With Corrosion Fatigue Testing

A new tentative code for corrosion-fatigue testing of sucker-rod materials (Code No. 30) has been published by the Division of Production of the American Petroleum Institute.

Formulated by the topical committee on materials of the central committee on drilling and production practice, the purpose of the code is to provide uniformity in the method of obtaining data on the behavior of sucker-rod steels under repeated stress, under specified standard conditions. It provides, further, for the establishment of an API corrosion-fatigue value on sucker-rod materials; and prescribes and describes: the use of a specimen of specific design; a test procedure involving proper speed control; and a method of reporting tests.

Code No. 30 may be obtained from the API offices in New York and Dallas at 50 cents per copy with usual discount for quantity.

Phillips Gets Patent for Removing Sulphur Content

A patent for a process of removing sulphur compounds from oil, has been issued by the United States Patent Office to Miller W. Conn of Bartlesville, Oklahoma, who has assigned the rights to Phillips Petroleum Company. Conn uses a catalytic method and takes the sulphur out of hydrogen sulphide.

Donald L. Fuller and Bernard S. Greensfelder, Oakland California, were granted a patent covering a process of producing synthetic benzine by treating a hydrocarbon fraction consisting essentially of methyl cyclopentane under hydroforming conditions with a molybdenum oxide catalyst, producing benzine as a principal conversion product. The patent has been assigned to the Shell Development Company, San Francisco.

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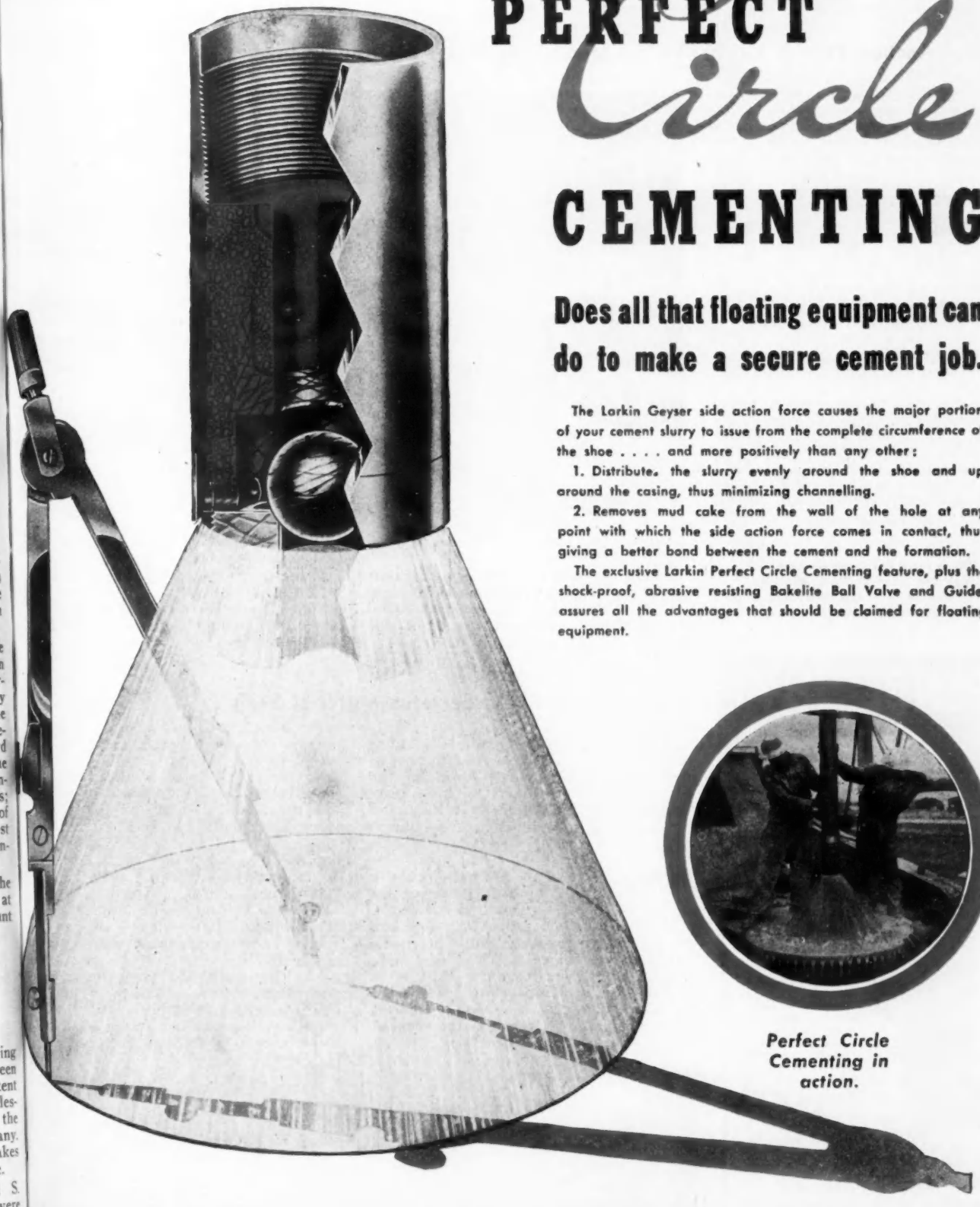
2. Removes mud cake from the wall of the hole at any point with which the side action force comes in contact, thus giving a better bond between the cement and the formation.

The exclusive Larkin Perfect Circle Cementing feature, plus the shock-proof, abrasive resisting Bakelite Ball Valve and Guide, assures all the advantages that should be claimed for floating equipment.



Perfect Circle Cementing in action.

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DRILLING HINTS

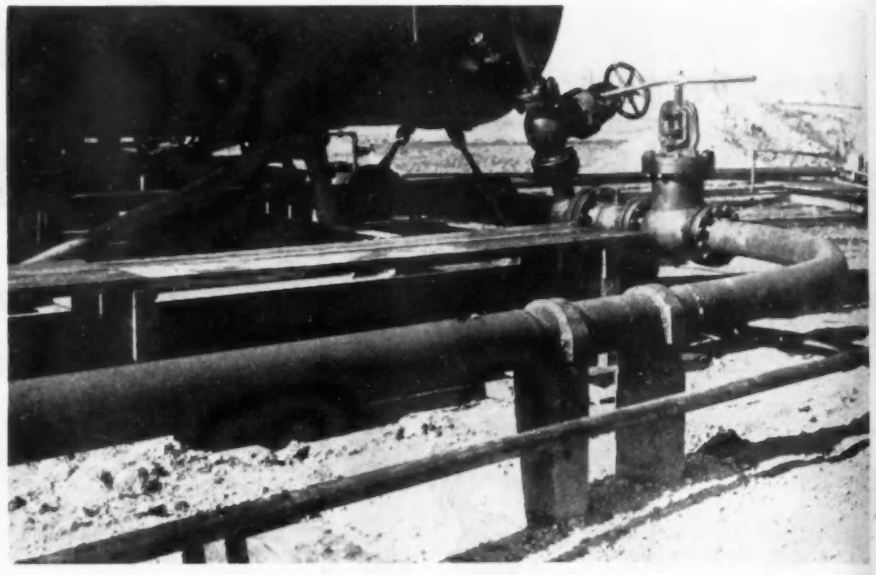
Welded Anchors Prevent Creep of Main Steam Line Under Expansion Changes

STEAM LINE STRINGING

Creep of the steam line due to alternate expansion and contraction of the pipe is frequently the cause of damaged fittings, sprung gate bodies, or dangerous fatigue in the metal of the pipe at some point where stress may be localized, as in the last engaged thread of a screwed connection.

One contractor, carrying the line in a wide sweep around the end of the boiler battery, found it necessary to anchor the long straight section to the derrick to prevent the effect of expansion being carried around the relatively stiff turn to the main control valve and the downcomers from the various boilers.

To anchor the line two posts salvaged from discarded drill pipe were set deeply into the ground, with their tops cut to form saddles in which the steam line would fit snugly. Over the top of the pipe were welded two inverted U-shaped clamps, formed to the contour of the pipe, and welded at the ends to the high points of the saddles in the supporting pipe.



Use of the two pipes formed a support which was highly resistant to overturning or shifting, and the line was found to be firmly anchored ahead of the fabricated bend.

Where loose soil is encountered, the two pipe supports are set in concrete, and the line cut free for a new location by burning through at the apex of the saddles, where the straps are free of the pipe and it is therefore not contacted by the flame of the burning torch.

$5.00 is paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, P. O. Box 2608, Houston 1, Texas

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Unitized Pipe Racks Serve as Material Skids

PIPE STORAGE

Unitized pipe racks, made in sections which may be handled readily on oilfield trucks, and which when on the move serve as containers for loose pipe, corrugated roofing, timber blocking, and other unattached materials, have solved the dual problems of transportation and pipe storage for one drilling contractor.

The racks, when supporting pipe, are set on timber supports, with the heavy base pipe member resting on them, either directly or through the intermediary of steel foot plates. The edge on which the drill pipe rests is faced with a 6x6 timber, set atop the trussed frame, and secured there by through bolts piercing both timber and pipe in a horizontal plane.

To the inside faces of these timbers are attached 8-foot sections of 3-inch pipe, in which slide joints of smaller pipe which bridge the gap between unitized racks, so as to provide easy rolling of pipe across a gap which must normally be left open for trucking or other rig operations.

Adjacent sections of the unitized rack are held in alignment by means of U-bolts and straps, placed around vertical members in the end trusses of the racks. This method of fastening allows much more latitude when setting up than does the alternate plan of drilling or burning holes through adjacent vertical members for through bolts.

DRILLING HINTS

Truck Cab Guard Base Carries Spare Gas Supply

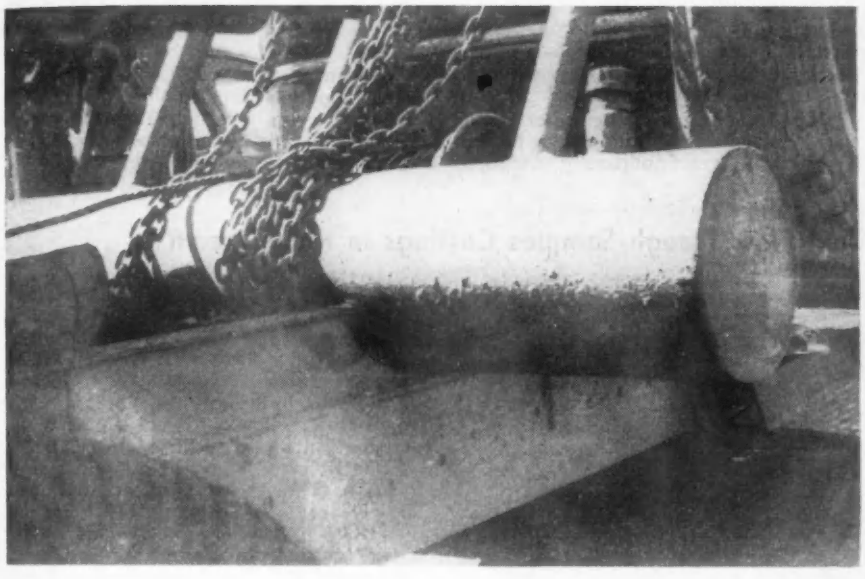
EMERGENCY FUEL SUPPLY

Most oil-field trucks are equipped with some type of extra tank for gasoline, to enable long trips to be made without too frequent stops for fuel. Many of these tanks are located in extension of the cab step, and in this spot sometimes are damaged when the truck must traverse rough country, or is forced to shoulder of the highway.

One Kansas truck foreman, when applying header across the truck frame to which the upright members of the cab-protecting guard could be welded, found himself short of the customary 4-inch pipe. The usual 10-inch pipe from which many of the auxiliary gasoline tanks are formed had been headed up, with plans calling for this unit being suspended along the frame as usual in such set-ups.

With the tank set across the frame, it was the proper length to form base support for the cab guard, and so it was fastened to the frame and the welder then proceeded to build the rack over it, with the section of extra-heavy 10-inch serving a dual purpose.

This use of the gasoline tank as guard base permits a longer tank, with greater fuel storage capacity, than is usually possible with the customary mounting below the frame. The welding of the guard, being completed before the container has held its first filling of fuel, is as safe as any other pipe welding, while the elevated setting of the tank simplifies its filling, as well as aiding in preventing gas-lock in the fuel line to the pump.



Clamp, Can and Handle Make Convenient Thread Washer

CLEANING EQUIPMENT

Washing of threaded connections, such as pins on cable tool bits and stem, frequently is a quicker and more effective method of cleaning them than is the use of a wire brush. One driller makes a dipper for this service from a coffee can, a wooden handle, and a strap to fasten the two together.

The can is used as it was left after removing the sealed top with a key, while the wooden handle is curved to fit around at least one third of the circumference of the can, so as to afford sufficient support to prevent caving in of the relatively thin metal while in use.

The supporting strap is thin steel, an inch in width, which is attached to one side of the handle with screws, then pulled tightly around the can, and the other end fastened with screws or bolts to the wood. If the strap be located just below the flared portion of the can there will be no tendency to shift in service.

Where a small thumbscrew and long threaded bolt are available, they may be attached to one side of the strap, and an eye affixed to one edge of the handle so that the band may be brought to the desired tension around the can top by taking up on the thumb nut. This device permits quick replacement of the can which, after all, is formed from relatively thin tin plate, and either wears out or corrodes through in a short period of the severe use which is met on the rig floor.

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Scrapes the inside of your casing to its full I.D.

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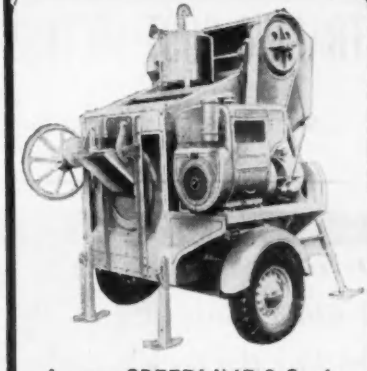
Removes hard cement and all burrs from gun-shot holes.

Best time to do this important operation is when the bit is run to drill out cement. Leaves inside of casing smooth and clean. Prevents future damage to packers or swabs; makes all "down-the-hole" jobs safe and easy.

CASING SCRAPER

The Largest Contractors Equipment Company in the South



Jaeger SPEEDLINE 2 Sack, the ideal mixer for concrete work in the Oil Field. Two bag capacity and speed in loading, mixing and unloading saves time when pouring foundations for pump and engine houses, rigs, and all types of buildings.

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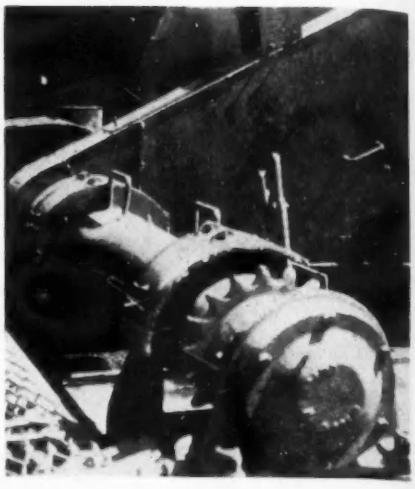
Pipe Sections Guard Exposed Jaw Clutch Units



On the lighter types of "spark-plug" rigs, sometimes improvised by assembling whatever units may be available, some of the jaw clutches used between the engines and final drives are sure to be located where more or less walking is required; the clutches then forming a serious hazard.

CLUTCH PROTECTION

One drilling contractor protects against injury at these points by forming guards from scrap pipe of a diameter sufficient to enclose the entire member. The shields or guards are made to span the upper half of the unit, with extended legs or supports bolted to the rig floor to hold the guard at the desired height. On the open side the guards are faced with light plate, cut to conform closely to shaft diameter, and tack-welded to the curved portion or, if it is desired to halt grease-throwing, attached with a continuous bead to form the required seal.

Hinged doors, cut in the upper portion of the guards and equipped with handles for easy manipulation, provide for clutch inspection and bearing lubrication. Here again sealing may be effected by welding on a cover strip around the edge of the movable portion, so that complete closure is afforded with the door.

Dual Flow Trough Samples Cuttings in Mud Stream

A drilling contractor operating in the Kansas fields found it necessary to build a new conduit and sample catcher out of two-inch lumber for every shift, and to avoid this extra work at every location, devised a unit made from scrap eight-inch pipe which filled every requirement and which was permanent equipment.

MUD FLOW SAMPLING

A section of salvage pipe, about ten feet in length, was split lengthwise, and the two halves spot-welded together to form two parallel troughs. One section was completely blanked off at one end, and a low dike or dam of metal welded across the other. The two channels were joined with a short pipe nipple, set low in the curves of both sections, and a baffle was built into the bottom of the main flow flume to divert a part of the cuttings into the settling unit.

The diverted flow, being but a small portion of the entire mud stream, moves slowly through the sample catcher, depositing the heavier particles and leaving clear mud to flow over the end baffle and rejoin the flow from the main flume.

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Take from ¼" to ⅝" Chain

Lone Star No. 1 and No. 2 are recommended for heavy duty service in oil fields
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River Plate House, 12 South Place, London, E. C. 2.

Tarakan's Two Major Oil Fields May Now Be Supplying Fuel for U. S. Fleet

The two main oil fields of the island of Tarakan, which supplied approximately 11 percent of Japan's petroleum from all sources in 1943 and 1944, were scheduled to begin supplying fuel oil to the U. S. fleet by the first week in July, according to the Australian News and Information Bureau, quoting Major General Hugh Casey, commander of the U. S. Engineer Corps in the southwest Pacific.

It is expected that initial pipe line deliveries to tankers will amount to nearly 1000 barrels per day, of natural crude suitable for direct use as bunker and diesel fuel. By the end of September the output probably will be stepped up to more than 10,000 barrels per day and may reach the prewar rate of better than 16,000 barrels daily by the first quarter of next year.

Royal Dutch Shell engineers have been on the job at Tarakan since the Australian invasion troops landed there early in May, reconditioning and re-drilling wells, installing new surface equipment and gathering lines, and supervising construction of two new loading piers off Lingkas Beach for terminal storage and loading pumps. A loading berth is being built 1700 feet out from shore, served by a 12-inch line carried on wooden piles. This provision is necessary to allow loading at any time of day or night, regardless of the nine-foot tide range or draft of vessels.

All storage tanks were destroyed by American bombers previous to the Australians' assault, but the Japanese were not able, in the limited time at their disposal, to permanently destroy many of the wells. All power units and pumping equipment were thoroughly destroyed, however. Portable power plants are now in place.

A few of the wells were found to be plugged with concrete and scrap steel, and are to be re-drilled as soon as the portable reconditioning rigs have completed the job of cleaning out less damaged wells, plugged with lose stones, dry cement and metal scrap. Producing depahs in the two main Tarakan fields of Pamoesian and Djoeta vary from 165 to 3400 feet. Thus, their producing potentials can be quickly re-established.

Activity in Venezuela Is Planned by Phillips

The Phillips Petroleum Company will have two drilling rigs operating before the end of this year in eastern Venezuela, where it holds a concession of some 25,800 acres in its Travioso block. By early 1946 five rigs will be in operation. Successful wells have been completed to the east and west of this concession while a third to the northeast had production.

Phillips Venezuelan Oil Company, a wholly-owned subsidiary, was organized last August and several concessions were obtained in 1944.

British Resume Gasoline Rations for Civilians

Great Britain's resumed rationing of gasoline to the motoring public provides for basic rations substantially the same as those in the United States before the recent increase. The rations for private motorists in general were resumed within a month after V-E Day, after having been started originally in September, 1939, and then stopped in June, 1942. The present need for restricted use of gasoline is due to heavy requirements in the Pacific and in policing and supplying military needs in Europe, government officials explained.

Private motorists who have been rigorously prevented from using their cars during the war period are now able to do so, and additional allowances are available to motorists who have been given small allocations for essential work, to traders who do deliveries, and to taxi, bus, and truck operators.

Motorists will receive monthly allocations based on horsepower, as follows: 20 h.p. and over, 7 gallons; 14 to 19 h.p., 6 gallons; 10 to 13 h.p., 5 gallons; up to 9 h.p., 4 gallons. Motorcycles will get 2 or 3 gallons monthly according to cylinder capacity.

While these amounts will not permit unlimited use of motor vehicles, they will allow owners to get their cars back on the roads, to save rations for summer holidays, and to relieve the traffic congestion which lack of autos has intensified.

Private Initiative Limited For Mexico's Own Oil Men

Mexican nationals as well as foreigners have their possibilities for private initiative in the oil industry definitely circumscribed, under a recent further ruling of the Mexican Supreme Court. The court refused to grant Rafael Cortina, Mexican oil man, relief from an order of the ministry of economy. The ministry's order had denied Cortina a renewal of his concessions to three oil tracts at El Moralillo, Tepetixpa municipality, Veracruz state, and had given the rights to the tracts to Petroleos Mexicanos, government agency for oil development.

The ruling was a reassertion by the court of the absolute sovereignty of the nation over oil deposits and the nation's enjoyment of the privilege of discretion in granting concessions to Mexicans or foreigners. This sovereignty has a constitutional basis, the court declared, and retroactivity of rights is no valid argument for setting it aside. Under presently existing law, backed by the constitution as amended heretofore, the ruling indicated, there have been annulled all previous laws and regulations that provided for sharing of rights to the nation's oil with others, whether companies or individuals.

Creole Production Gains 17.5 Percent This Year

Production from fields operated by Creole Petroleum Corporation in Venezuela has increased from a daily average of 390,245 barrels in January to 458,618 barrels in May, a 17.5 percent daily average increase.

With respect to the current total output of all fields in Venezuela the Creole company is responsible for 54 percent, since production of the entire country during May was at the average daily rate of 849,500 barrels.

Effect of Mexican Election On Oil Policy Conjectural

It is uncertain what effect, if any, there will be on Mexico's oil policy when a new president is elected to succeed Avila Camacho, incumbent, who is not eligible for reelection under Mexican law.

Regarded by many as No. 1 candidate is Lic. Miguel Aleman, present secretary of state under Camacho, who is scheduled to begin campaigning over the republic at once. His position of leadership in the race was enhanced by withdrawal of General Miguel Henriquez Guzman, prominent military man, and Lic. Javier Rojo Gomez, who recently tendered his resignation as regent of the federal district. Aleman is an attorney, capable, and prominent.

Another strong candidate is Foreign Minister Padilla, lately absorbed in the San Francisco peace conference, who recently was eulogized by United States Secretary of State Edward R. Stettinius, as an outstanding Latin American statesman who should go very far in his public career. It is considered in Mexico City as significant that Padilla reportedly will visit Washington before returning home.

Venezuela Oil Concessions Test Nears 12,000 Feet

Venezuela Oil Concessions, Ltd., a Royal Dutch Shell subsidiary, active in the Lake Maracaibo area, has broken a Venezuela drilling recard for depth attained.

The company's R-801, a deep test headed for the Cretaceous in the Cabimas field, is nearing 12,000 feet, which will provide a valuable log of the Lake Basin section.

The company's BA-1 well, several miles east of production at Lagunillas, was reported drilling at 7521 feet at the end of May. Begun last September, drilling for the first five months of 1945 has been carried on continuously at the rate of 300 feet a month. This rotary operation has encountered no igneous or metamorphic rocks in the well.

Record Refinery Runs and Crude Oil Production Favorably Affect Stocks

Stocks of all the major products were affected qute favorably in the week ended June 23 in response to record-breaking refinery runs and crude oil production. Inventories of residual fuel oil were substantially increased, as in the preceding week, and there was a large addition to stocks of distillate fuel oil, while gasoline stocks diminished only nominally and much less than normally at this season.

U. S. crude production averaged 4,898,000 barrels daily, up 10,000 from the previous all-time high of the week before. The production was 315,000 barrels a day or 6.9 percent greater than in the corresponding week last year. Crude runs to stills shot up by 103,000 barrels over the daily rate of the previous week, going above 5 million daily for the first time in history. The runs of 5,018,000 barrels per day were materially above the previous high of 4,950,000 daily for the week ended May 26 this year. They were 384,000 a day or 8.3 percent above runs in the like week last year.

As in some other weeks lately the nation's plants were charging to stills more crude than was being produced within the United States—120,000 a day more. Consequently, there was probably a further drain on crude storage, although imports may have been a good part of current supply. Crude stocks were reduced 380,000 barrels in the preceding week, the Bureau of Mines reported, having come down to 221,932,000 barrels as of June 16. That amount was only about 3 million barrels more than the 23-year low of early March this year. It was 8,633,000 barrels or 3.7 percent less than the 230,565,000 barrels held June 17 last year.

Gasoline production of 15,367,000 barrels in the week of June 23 was 235,000 more than in the preceding week and 1,430,000 barrels or 10.3 percent more than in the week ended June 24 last year. Total stocks of finished and unfinished gasoline were reduced 42,000 barrels during the week, having diminished to 87,462,000 barrels. That amount was, however, 2,765,000 barrels or 3.3 percent more than the 84,697,000 barrels held June 24, 1944. The week's decrease reflected a reduction of 281,000 barrels in stocks of military and other grades against an increase of 239,000 barrels in civilian grades. Military stocks amounted to 40,853,000 barrels at the end of the week, compared with 37,944,000 barrels at the same time last year. Civilian grade totaled 46,609,000 barrels on June 23, against 46,753,000 on June 24 last year.

Gas oil and distillate fuel oil production totaled 5,014,000 barrels in the week ended June 23, down 328,000 from the week before but 653,000 daily or 15 percent above output in the corresponding week last year. Stocks were increased 1,364,000 barrels to a total of 31,761,000, but that amount was 2,479,000 barrels or 7.2 percent less than the 34,240,000 barrels on hand June 24, 1944.

Residual fuel oil production of 9,609,000 barrels was 357,000 more than in the previous week and 850,000 barrels or 9.7 percent more than the 8,759,000 barrels produced in the 7 days ended June 24 last year. Stocks of residual were increased 411,000 barrels to 39,893,000, but that amount was 13,456,000 barrels or 25.2 percent less than the 53,349,000 barrels held a year previously.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 8
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	4,762	9-30	4,798	12-30	240,992	1- 1	89,162	4- 1	48,863	10-28	64,744	10- 7
1945	4,898	6-23	5,018	6-23	224,079	6- 2	99,012	3-24	38,298	1- 6	56,074	1- 6
ows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 8
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,382	4-12	90,914	7-12
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-18	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	220,258	9- 9	76,302	1- 1	30,232	4-19	49,737	3-18
1945	4,678	1- 6	4,656	1- 6	[4]218,675	3- 3	86,616	1- 6	26,483	3-17	38,548	5-26

TRENDS OF 1944 AND 1945

Trends in Week Ended:	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Gasoline Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1944:									
January 1	4,367	4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,380
January 29	4,409	4,359	240,251	13,427	81,075	4,054	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,013	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,367	51,326
April 29	4,431	4,300	235,342	13,126	88,342	4,284	30,236	8,398	49,985
May 27	4,514	4,532	234,423	13,502	86,468	4,702	32,035	8,568	49,812
July 1	4,587	4,638	228,860	14,052	83,559	4,496	35,360	8,872	52,235
July 29	4,608	4,627	225,112	14,115	82,665	4,833	38,135	8,900	56,280
August 26	4,667	4,698	222,931	14,112	80,740	4,566	41,453	8,680	59,839
September 30	4,762	4,775	222,393	14,494	78,028	4,622	45,329	9,292	64,226
October 28	4,740	4,658	223,235	14,117	79,058	4,772	48,705	8,985	64,382
December 2	4,712	4,693	221,591	14,853	80,427	4,082	45,832	8,981	61,727
December 9	4,704	4,552	220,258	14,611	80,880	4,056	44,436	8,923	60,458
December 16	4,695	4,537	222,075	14,145	82,747	4,353	42,413	8,727	59,280
December 23	4,729	4,682	222,575	14,635	83,355	4,605	40,846	8,798	58,509
December 30	4,705	4,798	222,998	15,342	86,614	4,257	39,495	9,156	57,430
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,651	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 2	4,859	4,804	224,079	15,317	88,696	4,857	29,819	9,437	39,022
June 9	4,853	4,827	221,552	15,256	87,896	4,842	30,339	9,382	38,996
June 16	4,888	4,915	221,932	15,132	87,504	5,342	30,397	9,252	39,482
June 23, 1945	[4]4,898	[5]5,018	.....	15,367	87,462	5,014	31,761	9,609	39,893
June 24, 1944	4,583	4,634	[5]230,565	13,937	84,697	4,361	34,240	8,759	53,349
Change:									
In week	+10	+103	−380	+235	−42	−328	+1,364	+357	+411
In year	+315	+384	−8,633	+1,430	+2,765	+653	−2,479	+850	−13,456
In year	+6.9%	+8.3%	−3.7%	+10.3%	+3.3%	+15.0%	−7.2%	+9.7%	−25.2%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Contient states. [4] Lowest since December, 1921. [5] Stocks, June 17, 1944.

Annual Wing Ding

The Los Angeles Chapter of Nomads will hold their annual wing ding at the Riviera Country Club, July 27, according to H. E. Cassidy, chairman. Planned are golf, horseshoes, checkers, chess, and dominoe matches. These will be followed by a dinner and a floor show, with a well-known movie actor as master of ceremonies. Ticket reservations are in the hands of Fred Tyler.

Carolina Test Abandoned

Coastal Plains Company's first wildcat test on the Floyd J. Karsten tract at Laughton's Point, 5 miles from Morehead City, North Carolina, has been abandoned at about 4300 feet. Reports of small shows of oil and gas have not been confirmed.

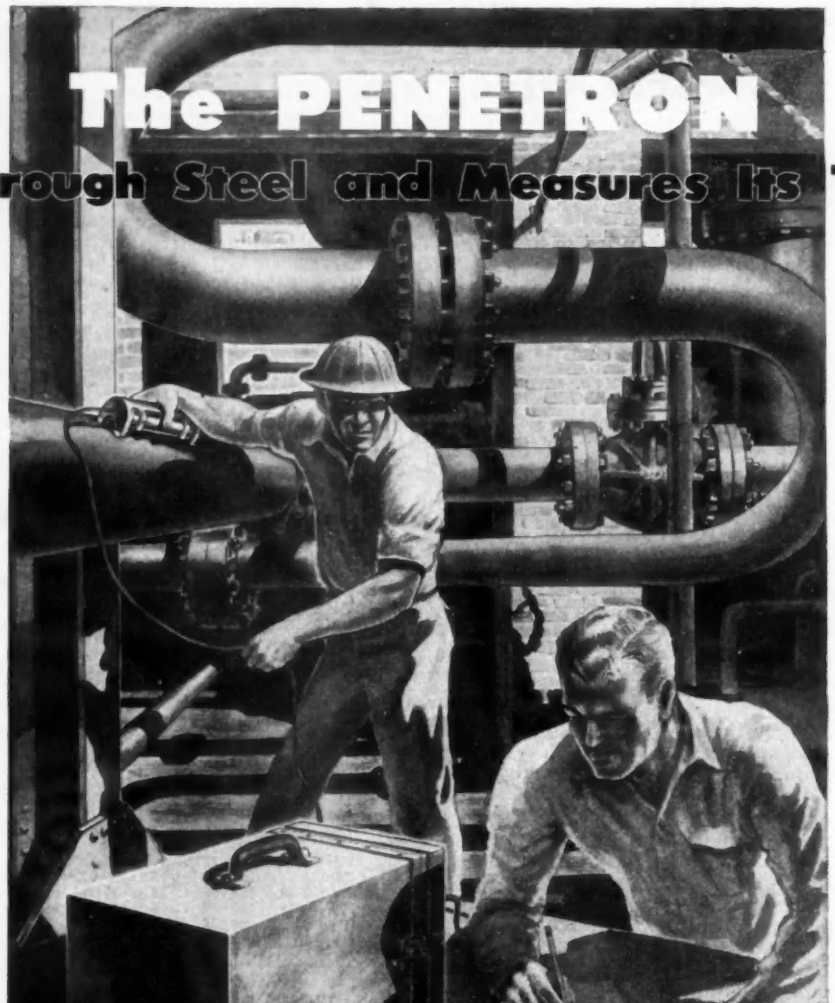
Officials of the company say a second test will be drilled in the vicinity of the dry hole.

EQUIPMENT IN WORLD-WIDE USE

TRADE MARK REGISTERED

The PENETRON

Looks Through Steel and Measures Its Thickness



THE PENETRON is an instrument which rapidly and accurately provides inspection data on lines, vessels and their contents without injury to the material being inspected. The **PENETRON** measures the thickness of any material from one side only, by use of penetrating gamma rays. It also determines the density of liquids, locates liquid levels or the interface between two immiscible liquids without access to the interior of the containing vessel.

Until the advent of the PENETRON, all the existing methods of inspecting materials have been time consuming, destructive, or have involved the use of cumbersome equipment. The PENETRON eliminates all existing difficulties by its extreme accuracy and portability, the complete unit weighing approximately 40 lbs. Designed by the Texaco Development Corp., the PENETRON has been licensed to Engineering Laboratories, Inc., as sole manufacturer and sales agent. Your inquiries will receive prompt attention.

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602-624 East Fourth Street Tulsa 3, Oklahoma, U. S. A.

Cities Service to Expand Kansas City Area Facilities

Cities Service Gas Company plans to spend $900,000 this year to increase facilities for deliveries of domestic natural gas to the Kansas City, Missouri, area. S. B. Irelan of Oklahoma City, president of the company, announced that the expenditure will be on additional compressors at the Welda, Kansas, compressor station and for 31 miles of 20-inch pipe line from the Welda gas field.

The facilities will enable the company to make fuller use of its storage field and to increase delivery for domestic markets in the area on peak days. Construction work will start as soon as federal approval is received. Other cities benefiting from additional facilities will include St. Joseph, Missouri; Kansas City, Kansas, and Topeka, Kansas.

TGT Granted Injunction In Assessment Fight

The Tennessee Gas & Transmission Company has been granted a temporary injunction by the West Virginia Supreme Court to restrain the state's board of public works from making effective a $968,000 public utilities assessment against the company.

The company operates a 1260-mile gas pipe line from Corpus Christi to Cornwell station near Charleston, and in its petition TGT contended it should not be classed as a public utility, merely because it owned a pipe line, and asked that it be assessed only for the physical properties which run through four West Virginia counties.

Arguments in the case will be heard before Circuit Judge Julian F. Bouchelle of Kanawha County (Charleston) who earlier had denied an injunction.

Motion to Dismiss Case Against Gas Firms Denied

FPC last week denied a motion of the Pittsburgh and West Virginia Gas Company and the Kentucky West Virginia Gas Company for dismissal of a complaint by the City of Pittsburgh that their natural gas rates are unreasonable, and ordered that hearings which were recessed June 19 be resumed July 10.

The investigation of the companies' rates and charges was initiated by the FPC April 18, and the City of Pittsburgh entered the case as an intervenor, whereupon the companies requested a minimum of 30 days to present a portion of their case and about three or four months to present the entire case. They also moved for dismissal of the Pittsburgh complaint, but the commission rejected all requests.

FPC also will resume hearings July 11 on the application of the Kansas-Colorado Utilities, Inc., for authority to acquire for $1,000,000, plus the inventory value of merchandise and supplies on hand, all The Central Gas Utilities Company's facilities in Baca and Prowers counties, Colorado, and Stevens, Stanton, Hamilton and Grant counties, Kansas. The case was heard last October in Denver, and was recessed to afford the applicant an opportunity to present additional evidence.

An application has been filed with the commission by the Nebraska Power Company for authority to issue $7,000,000 of first mortgage bonds, to be dated May 15, 1945, and mature ten years later, and to issue $7,000,000 of serial notes, the proceeds to be used to redeem all outstanding preferred stock.

Stanolind Receives Permit To Lay Wyoming Pipe Line

Stanolind Pipe Line Company's application for construction of an oil line in Fremont County, Wyoming, has been approved by the Wyoming Public Service Commission.

It will be an 8-inch line approximately 68 miles long from the Circle Ridge field, through the Maverick Springs, Steamboat and Pilot Butte fields with a lateral from the Winkleman field to Husky Refining Company's plant at Riverton, Wyoming, to connect with its Elk Basin-Casper line.

Russians Laying 155-Mile Gas Line to Kuibyshev

The Kuibyshev Oil Combine is laying a second ten-inch gas line from the Buguraslan field to the industrial city of Kuibyshev, a distance of 115 miles, in order to double deliveries.

It is reported that the present line handles 6,000,000 cubic feet per day. Gas production of the Buguraslan field exceeds 50,000,000 cubic feet daily, according to Russian sources. Oil produced from this field is shipped by rail to the refineries at Ufa.

U. S. Geological Survey Maps Northwest Oregon

The United States Geological Survey is mapping northwestern Oregon with particular attention to oil and gas prospects, F. W. Libbey, director of the Oregon state department of geology and mineral industries, has announced.

Mapping is also being done by oil companies, with most of this work being centered in Columbia and Multnomah counties.

Libbey said The Texas Company has been conducting geologic mapping and some prospecting work in northwestern Oregon during the past five or six years.

"This company has secured leases on large blocks in Columbia County and is now erecting derrick at a location about five miles south of Clatskanie," Libbey said. "A deep test is planned."

Richfield Oil Company and Amerada Petroleum Corporation also are working in northwestern Oregon. Richfield has leased 7500 acres near Portland and plans to stake location for a wildcat test soon.

26-Mile Kansas Pipe Line Given Approval of FPC

A certificate was granted The Kansas Power and Light Company June 27, authorizing the construction of 26 miles of pipe line in Pratt and Barber counties, Kansas, and a dehydration plant in Barber County, to become part of its system for transportation and sale of natural gas from the Lake City Field.

The Lake City Field gas contains helium in commercial quantities and the order carries a requirement that the company, if requested, will make all gas it may produce or purchase in the field available to the Bureau of Mines for the extraction of its helium content.

The new facilities authorized will make available 60 million cubic feet of gas daily after the second year of operation.

The commission also announced on June 27 that it had approved the proposals of the Central Kentucky Natural Gas Company to eliminate $453,931 in write-ups and other excess of recorded cost over original cost from its gas plant accounts, and also had approved proposals by the El Paso Gas Transportation Corporation to eliminate $32,770 similarly.

Sohio Plans Line

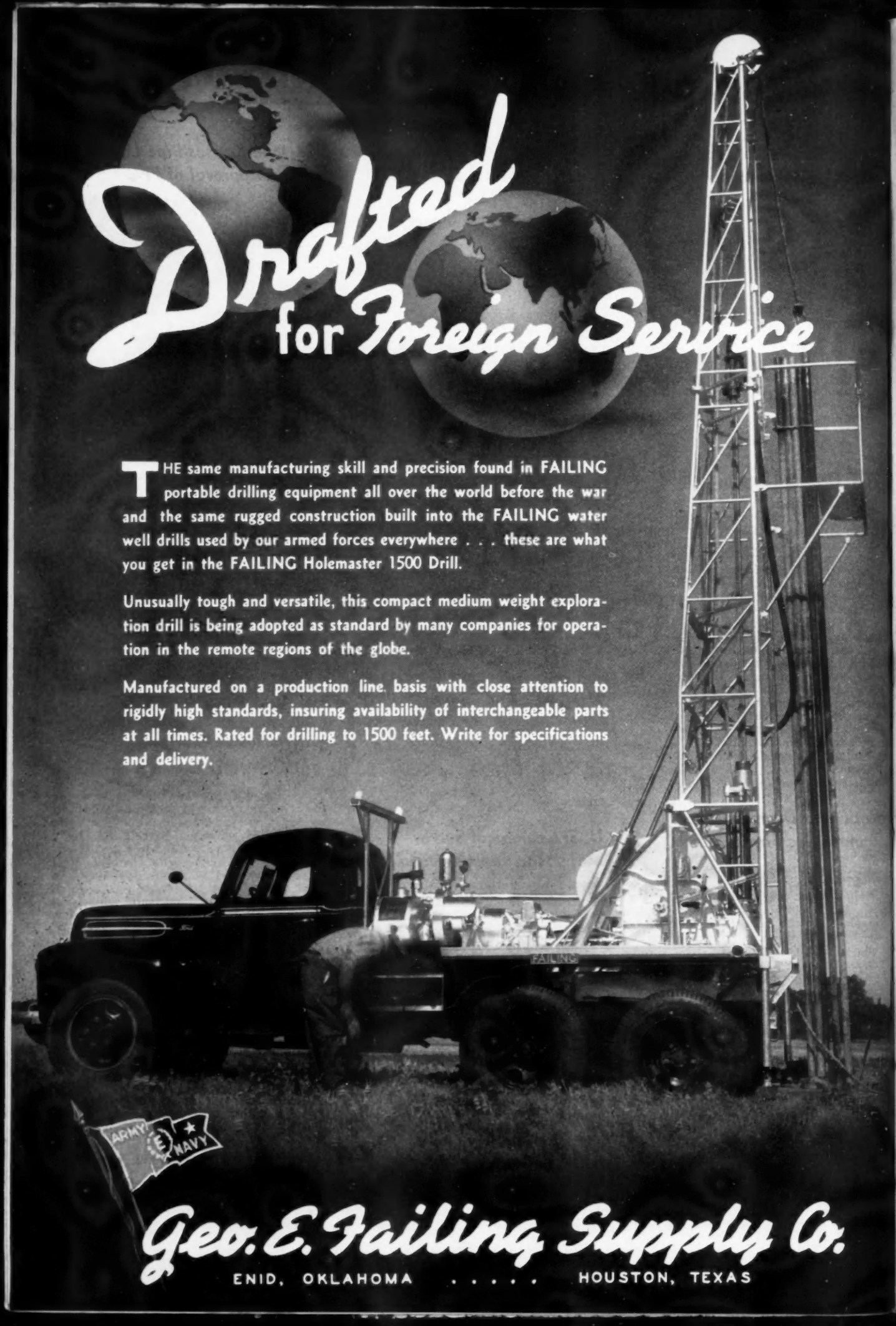
Sohio Pipe Line Company will lay a six-inch line from the Manziel field, north of Quitman, to the new two-well Merigale field, two miles east of Quitman, Wood County, East Texas.

Increases Authorized

The OPA has authorized increases of from 11 to 35 cents per barrel in five Oklahoma stripper oil pools, retroactive to June 1. The Skiatook and Wofford fields were given the maximum subsidy raise of 35 cents per barrel; the Doyle field's 1200-foot sand crude was allowed 25 cents per barrel; the Hotulke-West Earlsboro field was raised 20 cents a barrel, and the Pearsonia field, which comes under the "hardship" provision of the subsidy setup, was raised 11 cents per barrel.

New Humble Magazine

The initial number of *The Humble Way*, a bi-monthly magazine "designed to give Humble Oil & Refining Company employes, stockholders and others a better knowledge and understanding of the work Humble people are doing, how they are doing it, the progress they are making," has been issued. Contents will be broad enough to include affairs of the petroleum industry generally as well as company affairs. The first article detailing how Humble employes live and work in the May-June issue is "Bayou Boardinghouse" which is accompanied by watercolor sketches from the Louisiana Delta Country. *The Humble Way* has an excellent modern format and carries interesting photographs in addition to the color sketches.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☆ Oklahoma

Magnolia Gets Gasser In Layton Sand at Crescent

Magnolia gets gasser in Layton sand at Crescent; Earlsboro sand shows saturation in Keokuk area test; Middle Rowe sand at Cement flows 250 barrels of oil an hour; Phillips gets good Bromide sand producer at Aylesworth; Bartlesville zone tests in Moore district net good results; new pool looms for Logan County.

Logan County: Magnolia Petroleum Company established gas production from the Layton sand in the Crescent area after completing Stobaugh 2, C NW SW 13-17n-4w, for 17 million cubic feet of gas daily with 1560 pounds rock pressure. The well first tested 13 million cubic feet of gas-distillate at 4903-05 feet but after being shut in it was deepened to 4935 feet and completed as a wet gasser.

About 9 miles southeast of Guthrie, The Texas Company has prospects of opening a new area at Arundel 1, SE NE SW 2-15n-1w, after a drill-stem test in the Bartlesville sand at 5238-58 feet recovered 30 feet of oil, 30 feet of drill mud and no water. Operator was coring.

Caddo County: H. W. Snowden et al's McDonald 1, NW NW SE 3-5n-9w, at the town of Cement, established first commercial production in the Middle Rowe sand when the test flowed 250 barrels of oil an hour and was shut in for tankage. Flow was through perforated casing between 4102-60 feet. Saturation was reported in the Noble-Olson sand at 3350-74 feet. An active drilling campaign to the new horizon is planned.

Seminole County: The Carter Oil Company cored saturated Earlsboro sand in the Keokuk area at Brock 1, NW SE NE 15-10n-6e, reconditioned the hole and set production string at 3341 feet for a test. Earlsboro was topped at 3340 feet and core cut from 3354-64 feet. The top six inches were shale and the remainder sand saturated with oil and gas.

Marshall County: In the badly faulted area on the north side of the Aylesworth pool, Phillips Petroleum Company is proving good production in the Bromide sand zone after Redman 1, NE NE NE 24-6s-6e, flowed 400 barrels and 502 barrels of oil in 11 and 6 hours respectively. First Bromide was topped at 3068 feet, second zone at 3218 feet, and the third zone at 3533 feet. While cleaning out the bailer was lost but the well flowed natural before the fish was recovered.

Cleveland County: Mid-Continent Petroleum Corporation was preparing to complete Tubbs 2, NE NW SE 29-10n-3w, the second "dry" hole in the Moore area which is paying off in the shallower Bartlesville sand after being written off as a failure in the deeper Wilcox zone last winter. On the south edge of the South Moore pool, Sohio Petroleum Company et al's Pahlman 2, NE NE NW 35-10n-3w, was perforated opposite the Bartlesville at 7828-50 feet and flowed 350 barrels of oil through open tubing and was pinched in to flow at the rate of 22 barrels of oil an hour. Carter's Turner 1, C SW NW 26-10n-3w, plugged back from the Wilcox sand and perforated at 7834-53 feet opposite the Bartlesville, flowed about 8 barrels of clean oil an hour. Wood Oil Company's Siler 1, SW SE NE 30-10n-3w, in the West Moore pool, tested salt water in the Wilcox and was plugging back to the Bartlesville sand, where it recovered 3600 feet of oil on a drill-stem test.

Oklahoma County: Stanolind Oil & Gas Company has rebuilt derrick at Bednar 1, NW NW SE 23-12n-1e, wildcat east of Jones, and has resumed drilling below 5765 feet; Big Chief Drilling Company's Hayes 1, NE NE SW 8-11n-4w, was fishing at 7941 feet, total depth. Northeast of the Edmond pool, Apex Drilling Company completed McKee 1, NW SW 23-14n-4w, as a 60-barrel daily pumper. The well had been drilled to 6935 feet and was plugged back and perforated at 6312-27 feet.

Garvin County: South of Wynnewood, Continental Oil Company has moved in cable tools at Butterly 1, NW SW SE 14-1n-1e, and was preparing to drill into the Arbuckle lime. The wildcat topped the Oil Creek sand at 3879 feet to recover 1750 feet of heavy oil on a drill-stem test between 3875 and 4077 feet. Arbuckle lime, topped at 4164 feet, was drill-stem tested at 4176-4226 feet and recovered 60 feet of oil-stained mud. The test is a good prospect to open a new pool.

Well That "Put Tulsa on Map" in 1901 to Be Marked

Residents of Red Fork, Oklahoma, suburb of Tulsa, are preparing to mark the site of the well which put Tulsa "on the map" as an oil center and which was completed 44 years ago June 25.

The well is still producing between one and three barrels a day. Located on the edge of Red Fork, the Sue Bland 1 was drilled by J. C. W. Bland and Fred S. Clinton and was completed June 25, 1901. for 100 barrels a day. News of the strike brought trainloads of oil men to the Tulsa territory from all over the United States. Property on which the well is located is still owned by the Bland heirs, who are cooperating in the move to have the well suitably marked. Dr. Clinton, who helped to promote the well, is still living in Tulsa.

Wells Completed in the United States in Week Ended June 30

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	1	....	....	....	1	....	....	....	2	2	3	....	16	14
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Arkansas	....	....	....	....	....	....	....	....	2	2	2	2	85	98
California	36	....	....	2	38	....	1	....	8	9	47	44	1,065	997
Colorado	....	....	....	....	....	....	....	....	....	....	....	....	12	12
Florida	....	....	....	....	....	....	....	....	....	....	....	1	9	1
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	4	1
Illinois	15	1	....	3	19	....	3	....	9	12	31	42	811	833
Indiana	2	2	....	2	6	....	....	....	1	1	7	7	146	134
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	1	2
Kansas	15	4	....	8	27	....	....	....	8	8	35	39	774	865
Kentucky	3	....	....	3	6	....	....	....	1	1	7	10	213	347
Louisiana	13	....	....	4	17	....	1	....	4	5	22	27	484	359
North Louisiana	....	....	....	....	....	....	1	....	2	3	3	17	160	120
South Louisiana	13	....	....	4	17	....	....	....	2	2	19	10	324	239
Michigan	14	3	....	5	22	....	....	....	15	15	37	....	375	308
Mississippi	4	....	....	1	5	....	....	....	....	....	5	6	188	70
Missouri	....	....	....	....	....	....	....	....	....	....	....	....	16	13
Montana	4	....	....	1	5	....	....	....	....	....	5	8	97	153
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	2	7
New Mexico	4	3	....	1	8	....	....	....	1	1	9	4	217	210
New York	15	....	10	....	25	....	....	....	....	....	25	25	506	621
Ohio	5	3	....	....	8	....	....	....	....	....	8	9	373	418
Oklahoma	31	2	....	11	44	....	1	1	3	5	49	69	1,161	854
Pennsylvania	27	7	15	2	51	1	....	....	....	....	52	48	1,359	1,411
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	2	7
Texas	81	15	....	24	120	3	4	1	26	31	154	146	3,591	2,946
E. Tex. Bor. Co.'s	....	....	....	....	....	....	1	....	1	2	2	....	34	11
E. Texas Field	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Rest of E. Texas	1	....	....	....	1	....	....	....	1	1	2	1	109	147
North Texas	22	....	....	13	35	....	1	....	9	10	45	41	827	685
W. Central Tex.	3	....	....	2	5	2	....	....	2	2	9	14	237	199
West Texas	25	....	....	2	27	1	....	....	7	7	35	40	934	785
Tex. Panhandle	5	9	....	2	16	....	....	....	....	....	16	11	288	114
G. Coast, Upper	7	....	....	2	9	....	2	....	2	4	13	13	354	274
G. Coast, Lower	16	2	....	2	20	....	....	....	....	....	20	16	512	454
Southwest Texas	2	4	....	1	7	....	....	1	2	3	10	9	249	224
S. Central Texas	....	....	....	....	....	....	....	....	2	2	2	1	47	50
West Virginia	2	13	....	2	17	1	....	....	....	....	18	24	385	456
Wyoming	1	....	....	....	1	....	....	....	....	....	1	1	65	79
Total U. S.	273	53	25	69	420	5	10	2	80	92	517	512	11,957	11,219

* Includes distillate wells. † Includes salt water disposal wells.

☆ Kansas

Wildcats May Open Pools; Saturated Simpson Cored

Kansas wildcats may open new pools; test west of Wichita cores saturated Simpson sand; 2 discoveries assigned potentials; pipe set to test show west of Ferrell; new pay zone noted for Smock Sluss pool; Rooks County wildcat checks 100 feet high on Arbuckle.

Sedgwick County: Helmerich & Payne, Incorporated, was preparing to test Rausch 1, SE SE SW 14-27s-3w, wildcat north of Goddard after topping Simpson dolomite 34 higher than in nearby wells. A 6-foot core showed good porosity and saturation with good shows in the cuttings while circulating.

Sumner County: The Carter Oil Company's Latimer 1, C NW NE 12-33s-2w, discovery well for the area north of the Perth field, was given an initial rating of 157 barrels of oil daily from Simpson sand. The strike is significant as it revives activity in the region at the northern end of the Nemaha Ridge.

Russell County: Derby Oil Company's Rogg 1, SE SW 7-13s-14w, pool opener for Atherton North and about 1¼ miles north of the Atherton field, was assigned a potential of 462 barrels of oil daily from the Arbuckle lime from 3195-3200 feet. Although Arbuckle tops check in both areas the Rogg well is believed to be on separate structure because of a dry hole in between.

Butler County: K. T. Weideman set production string at Farmer 1, SE NW SE 8-29s-8e, after electrolog survey showed possibilities at 2086-95 feet in the Kansas City lime section. The well had been drilled to 3086 feet, dry in the Arbuckle, and plugged back. The Mississippi lime has been added to the Bartlesville and Viola producing zones in the Smock Sloss pool with the completion of J. E. Morris et al's Wilson 2, SW SW 30-26s-6e, good for 40 barrels daily.

Rooks County: Darby & Bothwell, Inc.'s Vohs 1, NEc 14-10s-19w, was checking 100 feet high on the Arbuckle as operator set pipe at 3552 feet, total depth, to test shows in the Lansing at 3438-41 and 3444-47 feet and in the Arbuckle at 3540-52 feet. The wildcat is 2½ miles north of the Zurich field and looks like a pool opener.

☆ New Mexico

Penrose Field Ordovician Prospect Testing Simpson

Ordovician prospect in Penrose field testing soft section in Simpson; 2 offsets to the Paddock pool's 5200-foot Florietta lime discovery confirm production; Yeso production not present in Drinkard field outpost.

Lea County: N. G. Penrose Inc.'s Penrose-Federal 1, Ellenburger project for the Penrose field, was attempting to make a drill-stem test at 7763 feet after drilling soft section in the Simpson. This well logged the Permian Simpson contact near the 7200-foot level, thereby becoming the highest Ordovician marker in the county. The Ellenburger zone is due near the 8300-foot level, although graniite is a possibility.

Repollo Oil Company's Rodgers 1, south offset to the Paddock pool discovery, cemented 7-inch casing at 5280 feet, or 13 feet off bottom, after a drill-stem test at 5115-90 feet yielded 4800 feet of 9.5-gravity oil on 2-hour test of the Glorietta. Mid-Continent Petroleum Corporation's Christmas 1, west offset to the discovery, flowed at a rate of 20 barrels of oil hourly through tester at 5080-5165 feet. The test was drilling below 5200 feet.

Penrose et al's Hinton 3, a mile south by west of the Paddock pool, was drilling at 7303 feet to explore the Lower Clear Fork. Production probably was temporarily passed up in broken Glorietta saturation at 5185-5250 feet, although testing tool did not remain open for a sufficient period to evaluate. Commercial gas was indicated at 5443-5500 feet.

Gulf Oil Corporation's Pike 1, 2 miles south by east of the Drinkard - Yeso area, and 109 feet low on the Glorietta marker, tested only 160 feet of gas-cut mud in the upper Yeso at 6554-6676 feet, and was drilling below 7040 feet. Humble Oil and Refining Company's Leonard-Federal 2, ⅔ mile southeast of its Ellenburger discovery in the Dublin area, was drilling at 9510 feet with considerable dip in the structure. Its discovery is being reworked because of water. Humble Pipe Line Company has completed a 64,000-barrel and a 10,000-barrel tank to accommodate the sweet crude from this area.

Phillips Petroleum Company's State-Lea-Mex 4, Maljamar area, was drilling unidentified formation at 12,957 feet.

Government of Mexico Honors Jack Danciger

The Republic of Mexico, the state of Texas and the City of Fort Worth recently paid tribute to Jack Danciger, vice president of Danciger Oil and Refining Company, Fort Worth, and an honorary consul of Mexico.

Jack Danciger

The occasion was the presentation to Danciger of the Order of the Aztec Eagle, highest civilian decoration conferred by the Republic of Mexico. The award was made by Carlos A. Calderon, Mexican Consul General at San Antonio, in recognition of the work done by Danciger "in the promotion of better understanding and closer friendship between the peoples of the United States of Mexico and the United States of America."

The number of decorations of the Order of the Aztec Eagle is limited under Mexican law. It was created for the purpose of expressing publicly the appreciation of the republic to outstanding citizens of foreign countries whose accomplishments in the field of international relations have proven beneficial to the welfare of Mexico and to the cause of democracy generally.

In recognition of the honor, the Texas House of Representatives, with the Senate concurring, congratulated Danciger in a resolution and the City of Fort Worth paid him tribute.

☆ West Texas

Triple-Pay Prospect May Produce in Fourth Horizon

Andrews County triple-pay prospect gets encouragement for fourth deep horizon; Crane County wildcat stretches its Devonian pay thickness; second Ellenburger well recorded by TXL field; Keystone's Ellenburger development involves 46 operations.

Andrews County: Shell Oil Company and The Texas Company's Ratliff-Bedford 1, 5 miles west by north of the Three-Bar pool, nearest deep production, was awaiting drill-stem test at 11,042 feet in Ellenburger dolomite, carrying oil stain, odor and porosity. This zone probably was topped in core at 11,014-20 feet, placing the well about 150 feet high to Sinclair Prairie Oil Company's Grisham-Hunter 1, failure in granite at 11,322 feet and only 2½ miles southeast. Ratliff-Bedford 1 flowed oil through tester from the 7800-foot Permian, 8800-9100-foot Devonian and the 9700-foot Silurian. The deep failure was cased and an unsuccessful attempt made to acidize tightly-packed Ellenburger. The absence of production may be attributed to lack of porosity rather than adverse structural position, although no production was indicated in the 3 upper zones. Sinclair Prairie's Bedford 1, 1½ miles northwest of its deep failure, was drilling at 5410 feet.

Humble Oil & Refining Company's Means 88-X, Ellenburger test for the Means field, logged base of the Permian at 10,090 feet, and was drilling dry lime at 11,680 feet without shows below the regular Permian.

Sinclair Prairie's University 2-146, 4 miles northeast of nearest Devonian production in the Fullerton field and near the east edge of the Clear Fork zone, was drilling lime and chert at 8955 feet, having based the Permian at 8465 feet. It is considered a failure in the Devonian.

Crane County: The Atlantic Refining Company's University 1-A, Ellenburger project that has been flowing 42-44 gravity oil through drill-stem at intervals since entering the Devonian at 7890 feet, or 284 feet high to an Ellenburger failure 2 miles northeast, was drilling lime and chert at 8820 feet. Most recent drill-stem test developed a flow of oil and gas through tester at 8700-40 feet. The nearby failure logged 1013 feet of Devonian before entering the Silurian at 9290 feet. The new prospect has greater thickness of Devonian pay than heretofore encountered in the state.

Gulf Oil Corporations' Henderson 1-E, recent Clear Fork discovery on the southwest side of the Sand Hills structure, flowed 2¾ barrels of oil and 33 barrels of water on 22-hour retest through ¼-inch choke, with gas volume rated at 725,000 feet daily. This production is from open hole at 4350-4409 feet, having plugged back from barren Ellenburger at 6625 feet.

Irion County: Shell Oil Company's Tankersley 2, ¾ mile northeast of its 8357-foot Cambrian failure, swabbed 125 barrels of oil and 97 barrels of water on a 23-hour test from Basal Pennsylvanian perforations at 7195-7202 feet. These perforations were squeezed with cement to retest new perforations at 7195-7200 feet.

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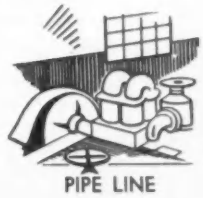

PIPE LINE

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A small commercial well is in prospect. This wildcat is supported by a 12,989-acre lease, thereby eliminating others from participating. Skelly Oil Company's Sugg 1, situated on a 8493-acre lease and 6¾ miles west of the Mertzon shallow pool, was drilling shaley-lime at 7165 feet.

Ector County: Phillips Petroleum Company's T. P. Land Trust 1-A, confirmation well and 2¼ miles southeast of the TXL field's single Ellenburger well, flowed 323 barrels of oil with gas-oil ratio of 1451-1 on 6-hour natural test through ½-inch choke from perforations in Ellenburger, topped at 9610 feet, or 43 feet high to the deep discovery. The well later flowed 427 barrels of oil through 16/64-inch choke in 16 hours, and was shut in for pipe line connection. Superior Oil Company of California became the latest and 11th participant in authorizing 4 locations for its lease on the SW of T&P Ry. 28, Block 45, T-1-S.

Sinclair Prairie Oil Company's Williamson 1, 2⅜ miles north by west of the TXL field's Ellenburger discovery, and possibly a small producer in the Devonian at 7883-8029 feet, was drilling dry lime at 8261 feet. The Silurian, due near the 8500-foot level, is its next prospective pay.

Stanolind Oil & Gas Company is credited with having paid $468,437.50 cash and an additional $100 per acre payable from ⅛ of the ⅞ production to the Grisham-Hunter Interests for lease on 3416 acres within and northwest of the North Goldsmith field. The drilling of an 11,000-foot Ellenburger test, previously announced, is an obligation under the terms of the sale. Some of the leases do not involve production rights above 6750 feet, as a 6431-foot failure in the North Goldsmith field indicated prospects of commercial production from the 6200-foot lime.

Winkler County: Stanolind Oil & Gas Company and Shell Oil Company's Waddell Bros. 1, ¾ mile northwest of the Wheeler 2-pay field, was drilling Simpson at 10,115 feet. This outpost correlates from 126 to 142 feet low on all geological markers since leaving the Permian beds. If it makes a commercial producer the partnership must drill the SW¼ of the same section to forestall December 18, 1945, lease expiration.

Richardson & Bass, Inc.'s Kansas City 1, 2¼ miles southeast of Ellenburger production in the Keystone field, was acidizing with 3000 gallons after developing a nominal show of oil and gas when swabbed to 5000 feet from plugged back depth of 10,630 feet. Perforations were made at 10,570-10,600 feet in Ellenburger, topped at 10,575 feet. This correlates 1435 feet low to Gulf's Keystone 49-0 and 1261 feet low to its Keystone 50-0, both prolific Ellenburger wells.

The development of the Ellenburger horizon in the Keystone field is attaining important proportions, with 46 current operations. These involve 2 wells testing, 34 drilling with rotary, 3 rigging up, and 7 locations. Gulf is active on 13 tests.

Ward County: Production rights below 2700 feet were retained by The Ohio Oil Company in selling its D. L. Johnson lease, H&TC Ry. 9, Block 32, Payton area, Ward County, to A. C. Walker and associates for $16,000 cash. The lease has 4 marginal wells in the 2000-foot sand.

Mississippi Report

First reports on well-status and gas-oil ratio were released for Mississippi fields by H. M. Morse, director of the State Oil and Gas Board.

The report sets forth that in May there were 531 producible wells in the 19 fields and 33 reservoirs of the state. During this period these wells produced 542,955,000 cubic feet of gas, 1,651,386 barrels of oil and condensate, and 1,271,877 barrels of water.

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☆ North Texas

Northeastern Young County Wildcat Flows from Strawn

Northeastern Young County wildcat flows natural from the Strawn; 2 shallow discoveries in Cooke County; important semi-wildcat in Montague County flows natural through tester, providing 2-mile extension to the Hildreth or Stoneburg areas.

Young County: Fain and McGaha's H. O. Prideaux 2, A. Rohus Survey A-240, and 3¾ miles south by west of the Garrett 4-well pool, Archer County, nearest Strawn production, flowed 200 barrels initial on preliminary gauge through choke. Production is from Strawn sand at 3622-37 feet. This strike is ½ mile southwest of the firm's Prideaux 1, which made an unsuccessful attempt to complete through perforations opposite saturation at the same level after testing dry in the Bend at 4461-4522 feet. Prideaux 2 is 150 feet north and 1150 feet west of the northwest corner of the A. Williams Survey A-2288, and on 281-acre lease.

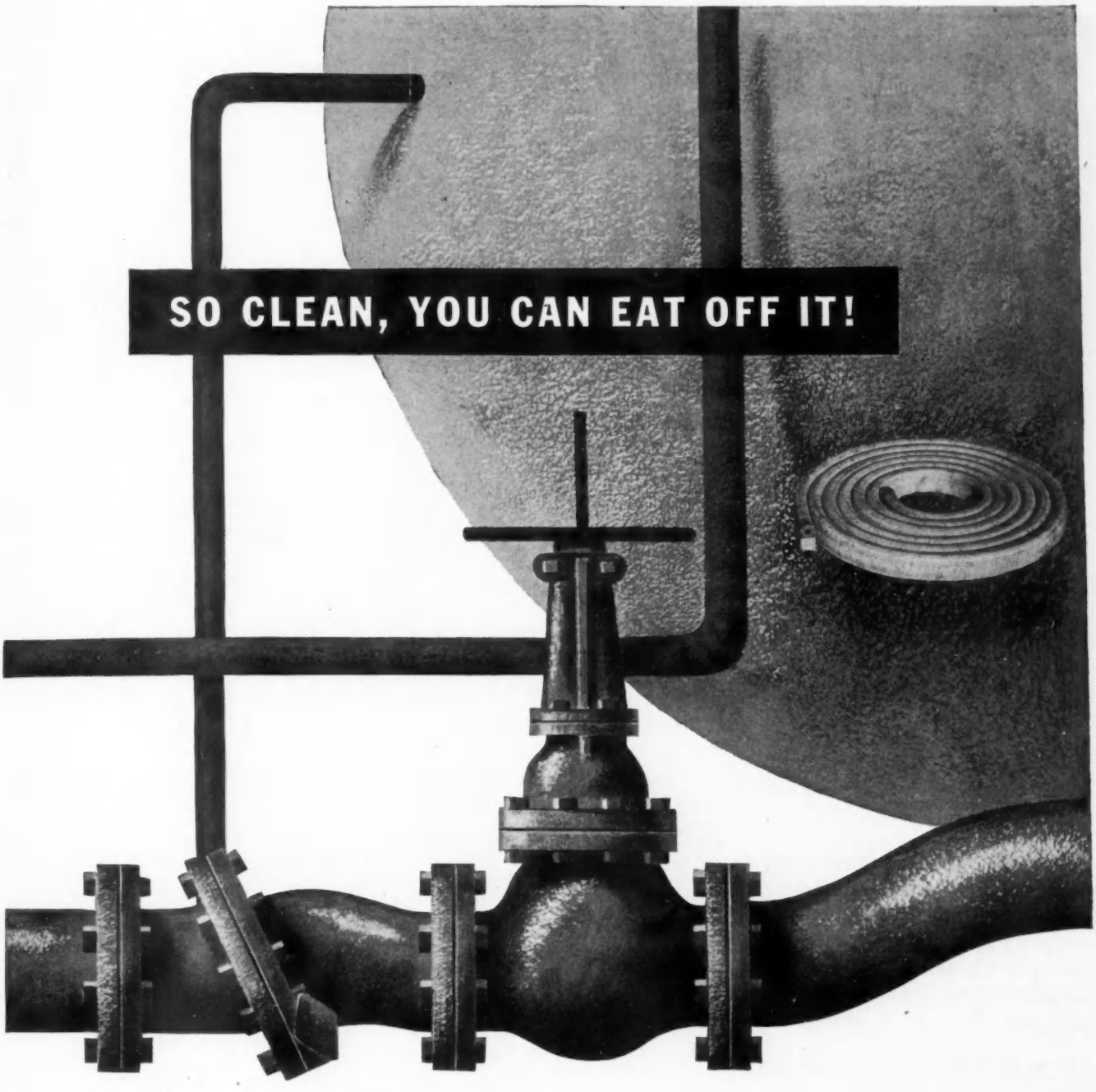
Cooke County: Hollandsworth Drilling Company's W. A. Mathews 1, Robert Ekey Survey A-357, ⅝ mile north of the Gatewood pool and separated by failures, pumped 80 barrels initial from Strawn sand at 1543-48 feet. This discovery is 1400 feet from the west and 330 feet from the north lines of the survey. An offset has been started.

Douglas Helms et al's Lee Blocker 1, J. Rodriquez Survey A-880, 1¾ miles southeast of Myra, is a new pool opener, having pumped 18 barrels of oil and 1 barrel of water on 6-hour test from sand at 1588-94 feet, having plugged back from 1602 feet.

Sun Oil Company's Field 1, 1¼ miles south by west of the Sivells Bend 2-pay field, halted in shale at 7024 feet to run 5½-inch pipe after electric log survey. A drill-stem test at 6892-6905 feet yielded 40 feet of oil-cut mud from the Beasley (Strawn) sand.

Montague County: W. B. Omohundro and Continental Oil Company's Johnson 1, NE NE SW Sect. 6 limestone CSL Survey, paved the way for considerable new development in flowing oil natural on 7-minute drill-stem test in Bend at 5995-6018 feet with elevation of 917 feet. The well will be carried below the Bend before running pipe for completion. It is 1½ miles north by east of the Stoneburg 6-well pool in the 6200-foot Bend, and is 2½ miles northwest of the Hildreth field. Johnson 1 correlates about level with both areas, thereby raising the possibilities that they will be united, although the Stoneburg pool's completions have been in the lower zone. The 2-mile interval has not been explored. Continental Oil Company's Posey 1, SE SE NW of J, Castleberry Survey, A-131, expanded the Hildreth field northwest in making oil flow from conglomerate at 5971-6010 feet with elevation of 1002 feet. The rig was damaged by fire while a drill-stem test was in progress.

Continental Oil Company's Landrum 1, E. Willis survey and 1½ miles northeast of its McNutt pool oil discovery in the 6700-foot Viola lime and 2½ miles southwest of Bowie, was drilling at 6305 feet after recovering 110 feet of oil-cut mud at 6010-25 feet in Bend, topped at 5910 feet or 2 feet low.



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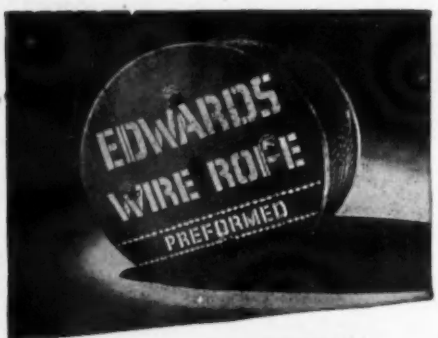

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☆ West Central Texas

Shackelford Test Has Thin Oil Pay in Mississippian

Shackelford County wildcat has thin oil pay in the Mississippian; shallow oil sand discovery pending in Jones County.

Shackelford County: Eltex, Ltd.'s, Merrick Davis 1, NE NE SE T&P Ry. 30, Block 12, entered the Mississippian at 5092 feet with elevation of 1877 feet and filled 700 feet with 43-gravity oil from saturation at 5102-5109 feet. Salt water appeared in deepening to 5120 feet. This wildcat is due to continue to the Ellenburger, then plug back and set pipe to try for completion.

Jones County: Ted Weiner and Lico, Inc.'s, Turner 1, NE NE SE Sec. 26, D&DA Survey, 1½ miles southwest of Avoca, is showing for a 15-barrel pumper from the King sand at 2119-23 feet. This wildcat is within a cluster of Canyon lime failures. The Texas Company's Johnson 1, 3¾ miles north of Lueders, was making a production test of promising show in Strawn saturation, topped at 4178 feet, with 7-inch casing at 4164 feet. This wildcat was plugged back from dry Ellenburger at 5618 feet to 4185 feet.

☆ East Texas

Bowie County Smackover Project Is Checking High

Bowie County Smackover project checking high with some evidence of oil passed up in Travis Peak; Wood County wildcat in Deep Basin; South Tyler field trying for second completion.

Bowie County: Jerry Hawkins, J. K. Wadley et al's Cork 1, MEP&P Ry. Survey A-428 and 6 miles north by west of Texarkana, was drilling at 5660 feet in Cotton Valley, topped at 5285 feet with elevation of 351 feet. This Smackover project is credited with having porosity and some oil saturation in Travis Peak cuttings near the 4500-foot level.

Northern Ordnance, Inc.'s, Lumpkin 1, Smackover test for the Dalby Springs area, was drilling shale at 2160 feet.

Wood County: Algord Oil Company and Homer Snowden's Jordan 1, John Roddin survey and 12 mlies north by west of Hawkins, was drilling Woodbine shale at 7230 feet. The Austin Chalk section was logged at 6648-6712 feet.

Cherokee County: Humble Oil & Refining Company's Maness 1, Jose Musquez survey and 3 miles south of Circle, was drilling shaly-lime at 8405 feet without shows since testing nominal volume of gas with salt water in the Rodessa at 7850-75 feet. G. L. Walker et al's Bowling-Pure 1, indicated Nacotoch sand discovery for the Lone Star pool, failed to maintain its oil flow by heads from perforations at 3355-70 feet, and will re-perforate.

Smith County: Phillips Petroleum Company's Hairston-Johnson 1, north offset to its South Tyler field oil discovery in the Rodessa at 9918-29 feet, was coring for the upper pay zone at 9860 feet.

Harrison County: D. E. and R. J. Whelan assured a new gas producing area with the completion of William Peal 1 in the Bettie Humphries Survey. The well flowed an estimated 2,232,000 cubic feet of gas on a ¼-inch tubing choke as well as mud wash water and an undetermined amount of distillate. Nearest production in this Harleton sector is 15 miles distant in the southwest end of the Jefferson field of Marion County.

☆ Southwest Texas

New Sand Is Opened by Sun in Yturria Field

Sun opens new sand in Yturria field; outpost oiler completed in Ross pool; final completions made on Duval County gas discovery well.

Starr County: A new sand has been opened in the Yturria field at Sun Oil Company's Flores 1. The well was completed for 46 barrels of 42.3-gravity oil daily on pump from perforations at 5847-70 feet.

About 1 mile southeast of the Ross field, W. D. Kennard's D. R. Semmes 1 has been completed for 6 barrels of oil an hour through a ¼-inch choke from perforations at 2396-2420 feet.

A 4700-foot wildcat test has been staked 12 miles north of Rio Grande City by W. W. Zimmerman. It is the F. W. Seabury 1 in Porcion 79, Tract 77.

Duval County: Final completion has been made at Santa Clara Oil Company and Cox & Hamon's Clara Driscoll 3, gas discovery well 13 miles northwest of Benavides. The well gauged 12 million cubic feet of gas daily, open flow, from perforations at 3160-66 feet.

Several failures were listed in this county during the week. Taylor Refining Company's Antonio G. de Romano 1, southeast of Benavides, was dry at 5637 feet. H. J. Porter's Jesus V. Ruiz B-1, 12 miles west of San Diego, was abandoned at 4005 feet.

Butcher-Arthus, Inc. and Taylor Refining Company have completed C. M. Robinson 3 in the Robinson field for 59 barrels of 35.4-gravity oil in 24 hours through a 7/64-inch choke from perforations at 3952-62 feet.

Old Well Raises Hopes for West Virginia Gas Strike

Considerable interest is being evidenced in the possibility of finding additional gas reserves in West Virginia, following the encouraging performance of a Tucker County well when opened after being shut in for a year.

The well, The Ohio Oil Company's West Virginia Power & Transmission Company 1, 6 miles southeast of Davis, originally was completed July 3, 1944. It gauged 120,000 feet with 3200 pounds pressure from Oriskany sand at 7968-8036 feet. When cleaned out and reopened in early June this year, the well gauged 1½ million cubic feet of gas.

The well is of significance because it demonstrates the possibility of similar fields in other Appalachian Mountain structures.

Ohio has reached 5000 feet on a second well, 1 mile south on a structure originally mapped by David B. Reger for West Virginia Geological Survey in 1923. Ohio owns nearly 40,000 acres surrounding the well, of which 17,000 acres are said to be within a closure that reaches a maximum of nearly 500 feet.

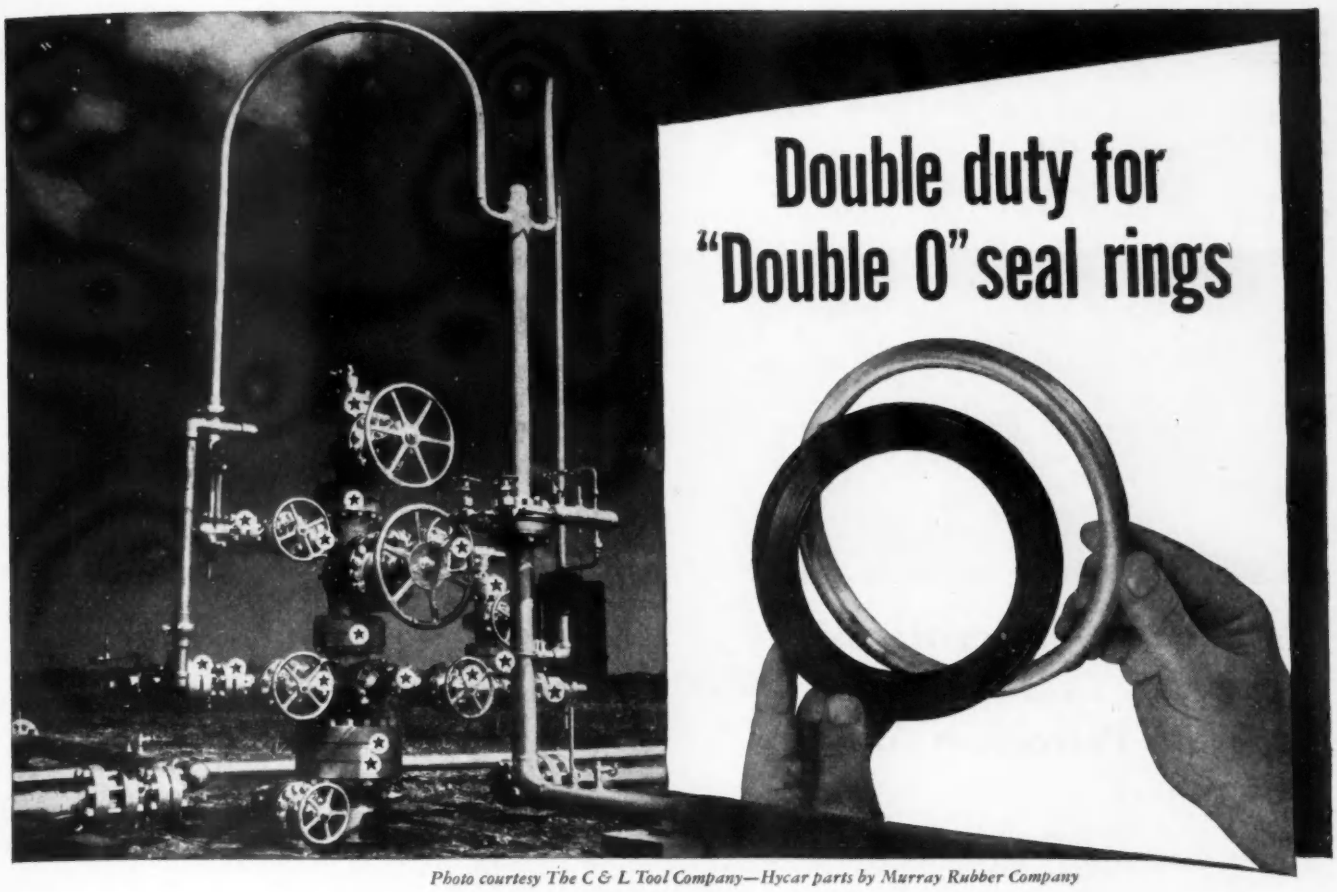

Photo courtesy The C & L Tool Company—Hycar parts by Murray Rubber Company

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WHEN the API ring gasket replaced "soft packing" for sealing well heads and drilling control units a few years ago, everyone thought that a seal had finally been found that would last the life of the well head. But it didn't quite turn out that way. After long service, some of the metal rings were found to have been so badly eroded by the hydrocarbons that they were no longer pressure tight. And in coastal areas salt air and water corroded the outer surface of the ring, contributing to its eventual failure.

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Atascosa County Wildcat Registers Show of Oil

Slight oil show reported in Atascosa County wildcat; Kimble County wildcat abandoned in Ellenburger lime; Quintana to drill test near Gonzales.

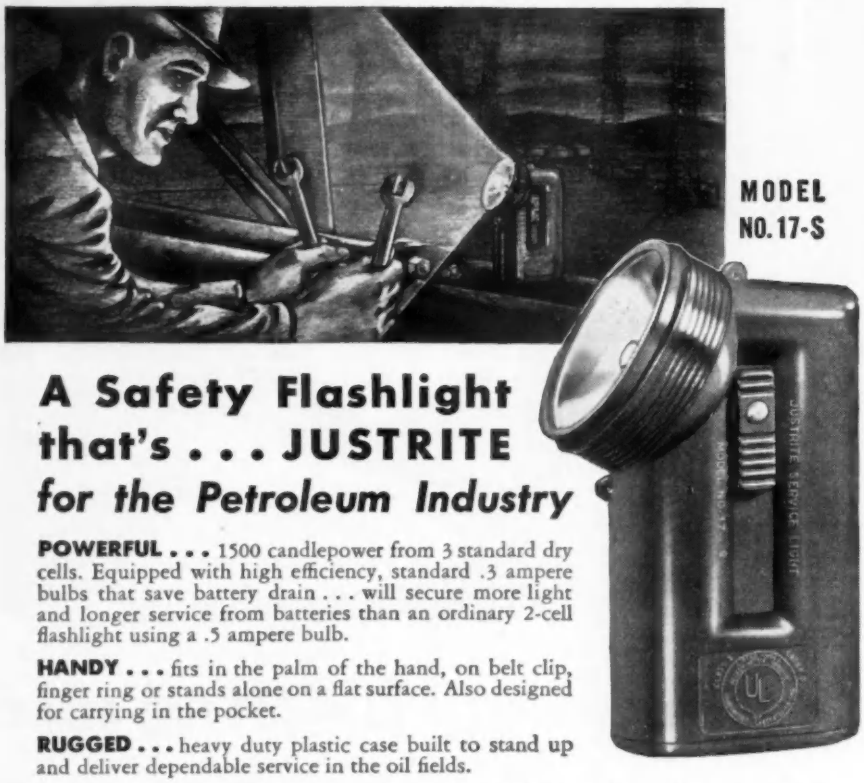
Atascosa County: Gulf Oil Corporation's Emma Tartt et al 1, wildcat test 14 miles southwest of the Hobson field, is drilling near 5000 feet in hard sand. This wildcat is credited with picking up a slight show of oil in core at 3793-99 feet.

Quintana Petroleum Corporation's C. Muil 1, wildcat test in the J. C. Mattison survey, was drilling below 6500 feet in shale.

Kimble County: Texas & Pacific Coal & Oil Company's Murr 1, wildcat test in the Short survey, has been abandoned at 4473 feet in Ellenburger lime. Top of the Ellenburger was 3840 feet.

Gonzales County: Quintana Petroleum Corporation has spotted a wildcat test 4 miles northwest of Gonzales as the Anna Spahn 1 in the town of Refugio Grant, lot 4, block 17. This will be a deep test.

Dimmit County: Bennett Brothers Drilling Company's Mary Brauchman, wildcat test 3 miles north of Brundage, has been abandoned at 5501 feet. A second test in the area is planned.



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Falls City Field, Karnes County, Deep Sand Opened

Deep sand is opened in Falls City field; Jackson County wildcat is failure; Boyce gas discovery well makes flow test; Willacy County wildcat still testing.

Karnes County: A new sand has been uncovered in the Falls City field at Gulfshore Oil Company's A. F. Pawlik 1. With total depth of 6204 feet, pipe was perforated at 6032-38 feet and the well flowed 135 barrels of 39-gravity oil and 48 barrels of water daily through a 3/16-inch choke. Tubing pressure was 220 pounds with the gas-oil ratio 257-1. This is the deepest sand in the field.

In the same field, Southern Minerals Corporation's Joe Bartosch 2 has been completed for 246 barrels of 49.3-gravity oil daily through a ⅛-inch choke from 4644½-55½ feet. The gas-oil ratio was too low to record.

Jackson County: Moore & Ahern's A. Michalek, Sr. 1, wildcat 4 miles north of Vanderbilt, has been abandoned after testing salt water through perforations at 4867-69 feet and 4863-65 feet.

Goliad County: On a completion test, Magnolia Petroleum Company's W. W. Boyce 1, gas discovery well in the Boyce field, flowed 110 million cubic feet of gas daily, open flow. The test was made in perforations at 7470-90 feet. Total depth is 8500 feet with 7-inch casing set at 7806 feet. The oil discovery well in this field is the Transwestern Oil Company's Altman Estate 1.

Willacy County: Activity in this area continues at a peak level with location for a new 10,000-foot wildcat test being staked by Phillips Petroleum Company 12 miles northeast of Rio Hondo. The test is the W. S. Livingston 1 in Share 6, Block 1.

Magnolia Petroleum Company and J. S. Abercrombie Company's Dohe 1, wildcat test near Raymondville, is still making a series of tests around 9800 feet. So far the recovery has been salt water. However, several higher sands are credited with carrying oil.

Kleberg County: Tide Water Associated Oil Company has opened a new sand in the Ricardo field with completion of H. C. Porter 1 through perforations at 6320-22 feet. The well flowed 151 barrels of 38.6-gravity oil daily through a ⅛-inch choke. Tubing pressure was 725 pounds and casing pressure 1350 pounds.

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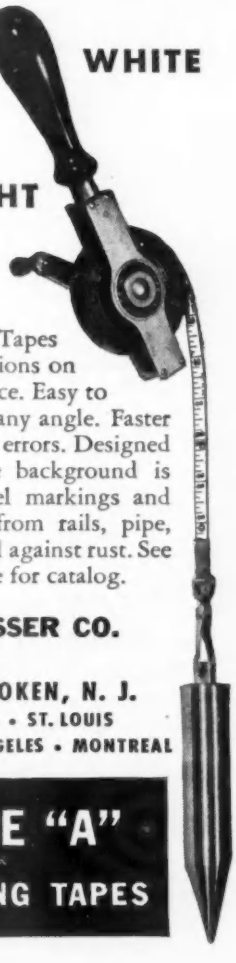

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☆ Upper Texas Coast

Opening of Cockfield Sand Pool Near Willis Reported

Cockfield sand pool reported opened near Willis; Magnolia opening production on southwest flank of Hockley dome; Sinclair recompletes Glasscock discovery as oiler; deep wildcat tests staked in Brazoria County.

Montgomery County: Although information is being withheld, K. B. Knox Drilling Company's J. W. Wood 1, Weir survey, is credited with opening a new cockfield sand oil pool 4 miles northwest of Willis. Reports say the well has been completed in the Cockfield sand at around 3756 feet with 6 feet of oil sand being logged in a 10-foot sand section. Reports say a good flare is burning with the well flowing into two 250-barrel tanks.

Harris County: Magnolia Petroleum Company's Warren Ranch 2, southwest flank of the old Hockley salt dome, is making final completion in limestone at 6356-66 feet. On a 12-hour gauge, open hole, the well flowed 196 barrels of 30.4-gravity oil through ¼-inch chokes, top and bottom, with a gas-oil ratio of 406-1. Operator is running tubing for final completion. Previously, the well drilled through about 1500 feet of salt and went into a Cockfield-Yegua sand section. A drill-stem test at 5684-5731 feet recovered 2400 feet of 36-gravity oil. The test was drilled deeper and after logging 10 feet of limestone, pipe was set on top of the formation at 6356 feet. Whether the limestone identifies a second cap has not been determined. Discovered in 1923, the Hockley area has produced about 25,000 barrels of oil.

On the west flank of the Pierce Junction dome, Gulf Oil Corporation's C. S. Settegast et al 1 is testing around 9352-72 feet. So far the recovery has been salt water. The best shows are reported around 9200 feet.

Colorado County: Sinclair Prairie Oil Company has recompleted C. G. Glasscock 2, gas discovery well in the Glasscock field, as an oil producer. With top of pay at 9190 feet, operator acidized with 500 gallons and the well flowed 77 barrels of 46-gravity oil daily. Tubing pressure was 700 pounds and casing pressure 1180 pounds. Gas-oil ratio was 9914-1. The well originally was completed as a gas-condensate well at 9203-08 feet, 9216-26 feet and 9274-80 feet.

Brazoria County: Butcher-Arthur, Inc. and Salt Dome Oil Corporation have staked a 9000-foot wildcat test 4½ miles north of Manvel. It is the C. W. Masey 1 in Sect. 27, HT&B survey.

A 12,000-foot test has been staked in the Chocolate Bayou area by Phillips Petroleum Company as the Triangle Development Company 1 in the HT&B survey.

Galveston County: Pan American Production Company's R. B. Peters 3, J. W. Lytle survey, on the northeast side of the Dickinson field and about 1 mile northeast of the company's Peters 2 dry hole, is disappointing. The well stayed on the down throw side of the fault and picked up water in the Peters gas sand at 8674 feet. The test now is drilling below 9000 feet and probably will halt operations at about 9250 feet instead of continuing to its original projected depth of 11,500 feet.

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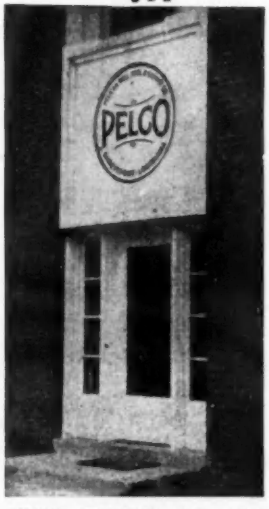

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Well on North Flank of St. Martinville Completed

Continental completes third well on north flank of St. Martinville; Humble to drill Allen Parish wildcat; Helis completes University field oiler; Calcasieu Parish wildcat test is abandoned.

St. Martin Parish: Continental Oil Company has completed a third gas-distillate well, the second in the recently opened deep sand, on the north flank of the St. Martinville dome. The company's Durand 1, 79-10-6e, drilled to 10,782 feet and completed through perforations in 7-inch casing at 9975-90 feet for 47 barrels of 47.5-gravity distillate daily through a 12/64-inch choke. Tubing pressure was 3550 pounds. Although the company's Liquidators, Inc. 1, deep sand discovery well, was completed through perforations at 9750-65 feet, the Durand 1 is considered in the same sand but structurally low.

Allen Parish: Humble Oil & Refining Company was preparing to start operations at Mrs. J. A. Bel Estate B-1, wildcat test in 33-5s-4w. Projected depth is 10,500 feet.

East Baton Rouge Parish: William Helis' Dearing Community B-1, University field, has been completed for 103 barrels of 45-gravity oil daily through a 6/64-inch choke from perforations at 9668-78 feet. Tubing pressure was 2175 pounds.

Plaquemines Parish: Tide Water Associated Oil Company's Manhattan 19, Venice field, was preparing to plug back to test another sand after recovering salt water on tests at 8626-86 feet and 8630-38 feet.

Calcasieu Parish: Arkansas Fuel Oil Company's Louisiana State 1, wildcat test in the Turner's Island area, has been abandoned at total depth of 9513 feet. Sand showing salt water was logged at 7207-37 feet and 9005-29 feet.

St. Landry Parish: Gulf Refining Company has completed another oiler in the Krotz Springs field. The company's Opelousas 1-F flowed 175 barrels of oil daily through a 7/32-inch choke from perforations at 9354-74 feet with a gas volume estimated at 3 million cubic feet.

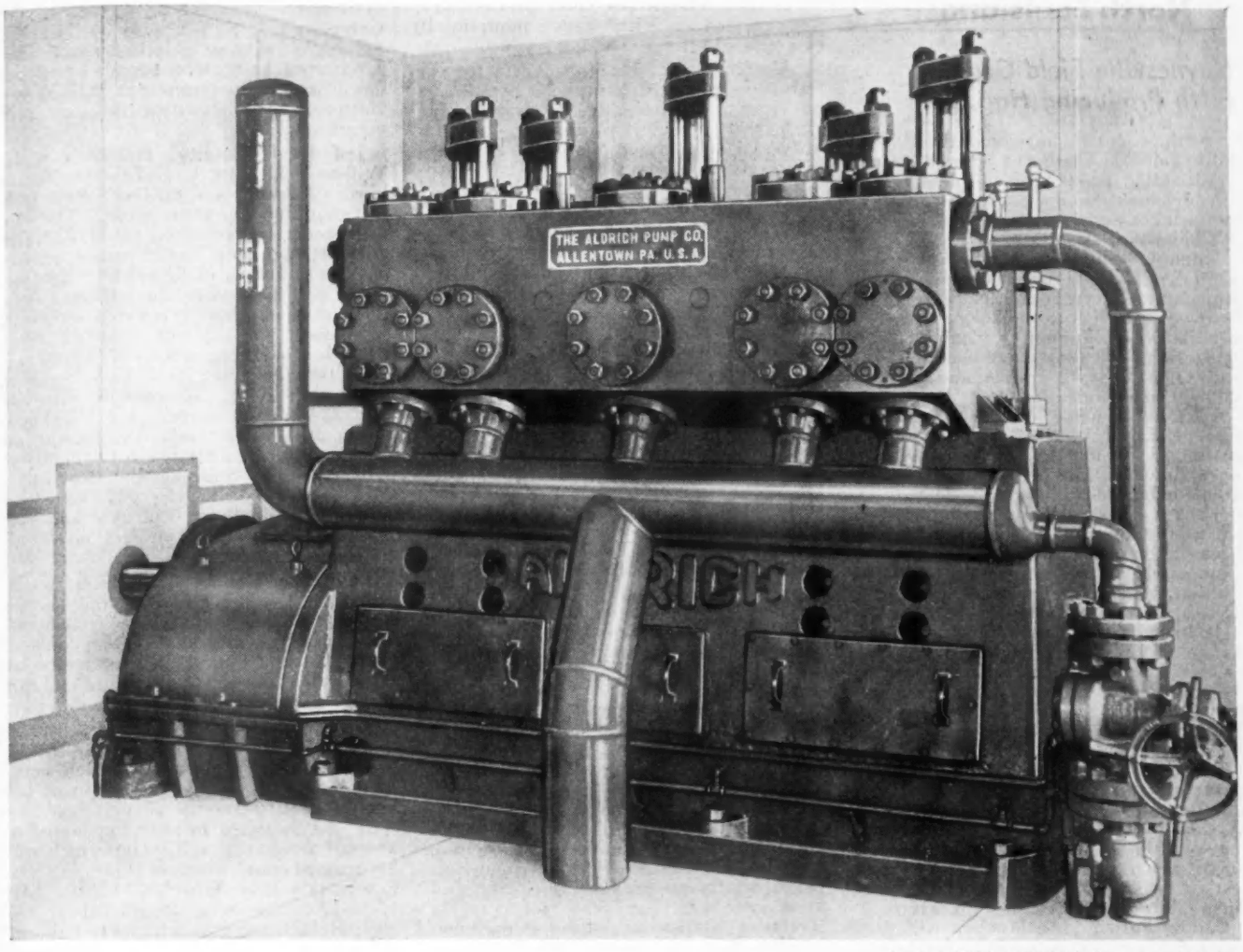
Jefferson Parish: The Texas Company's State 1, wildcat test in East Barataria Bay, is drilling below 12,750 feet in sandy shale after setting 7-inch protection string at 12,000 feet.

Cameron Parish: Magnolia Petroleum Company's Lutcher 1-A, 32-14s-11w, wildcat test in the Mud Lake area, is drilling at 10,400 feet in hard sand.

Rodessa Absorption Plant Dismantled by Skelly

Skelly Oil Company is dismantling its 5 million cubic foot daily capacity absorption plant in the townsite sector of the Rodessa field, Louisiana. Wells providing the gas for this plant have been diverted to other plants in the field.

This plant was acquired when the company absorbed the East Texas Refining Company, and may be utilized in the Carthage field, Panola County, Texas, where the Skelly Oil Company is launching a major drilling campaign on its extensive gas reserves.



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☆ North Louisiana

Haynesville Field Given Fifth Producing Horizon

Fifth producing horizon of the Haynesville field of Claiborne Parish discovered; initial production of Jackson Parish discovery annouced along with 11 new stakes and 14 completions.

Claiborne Parish: Blackwell Oil & Gas Company brough in Waller-Beene 1-A, C NW SE 10-23-8w, Haynesville field, flowing an average of 21 barrels per hour on ½-inch bottom choke and 5/8-inch top choke. Production is from 7980-8004 feet, where 120 shots were used to perforate. The oil is 42 gravity and green in color. Gas-oil ratio is 500-1.

Hassie Hunt Trustee finaled the Greene Unit 1, 10-21-4w, making an estimated 25 to 30 barrels of distillate on open flow per million cubic feet of gas and flowing 23 million cubic feet of gas per day. This well was completed in early May, but initial production had not been announced. Big West Drilling Company's A. N. Alford 1, tested an estimated 18 million cubic feet of gas per 24 hours on open flow.

Jackson Parish: Shell Oil Company's Tremont Lumber Company 1, 22-15-1, on initial production is reported making 24½ million cubic feet of gas with bottom hole pressure at 4527 pounds. Production is from perforations between 9588-22 feet.

Bienville Parish: Arkansas Fuel Oil Company staked an outpost to Ohio Oil Company's Woodard-Walker 1, with Woodard-Walker Unit 1, 660 feet from the south line and 664 feet from the west line. It is a Pettit test. This is the second test to be staked for in the Sailes area since Ohio brought in their discovery.

Caddo Parish: Joe Mucher will drill Delta Refining Company 1, 10-21-16w, Pine Island field, to 3000 feet.

W. B. Johnson plans W. P. Stiles 7-B in the Caddo field. It will be a 2800-foot test.

Concordia Parish: The Carter Oil Company is to drill Murray Marks 1, C SW SW 56-9-10e, Lake St. John field, a Massive test. The California Company will drill A. B. Learned 3, 23-9-10, and L. R. Alwood 4, 9-9-10. Both are in the Lake St. John field and are projected to 9300 feet.

DeSoto Parish: Triangle Drilling Company is to drill Whitake 1, in 33-14-13, Holly field. A. J. Bankhead found Porter 1, a wildcat in 23-12-13w, producing salt water and has temporarily abandoned the hole. J. P. Owens abandoned the C. M. Tompkies Estate 1-J, Holly field, at 2858 feet.

Red River Parish: Hill Myers et al staked the Herold 2, C SE SE SW 1-12-11, Bull Bayou field. C. H. Tuttle again tested Fee 1, 7-13-10w, and tested water. It is being temporarily abandoned.

Richland Parish: The A. Robinson 1, SW NE 27-17-9e, Delhi field, will be drilled by Sohio Petroleum Company. It is a Tuscaloosa test. R. W. Williams' Stone 1, C SW SE 30-17-7, was abandoned at 7010 feet.

Murphy-Sun Oil Company's J. E. Holt 6, 21-17-9e, flowed 260 barrels of oil per day on a 3/16-inch choke.

Tensas Parish: California was isued permit to drill the H. M. Marks et al 7 in the Lake St. John field.

Sabine Parish: Mrs. S. B. Evans' Burkett 1 of the Converse area, which was completed in the latter part of May, is reported on initial gauge pumping 10 barrels of oil per day.

Union Parish: Two producers for the Monroe gas field have been completed. Interstate Natural's Fee 170 was flowing 1,388,000 cubic feet of gas per day with pressure at 815 pounds. The Southern Carbon Company's Grayling 47, was producing 1,096,000 cubic feet of gas per 24 hours with pressure at 630 pounds.

Webster Parish: Hunt Oil Company complete Mrs. O. G. Roberts 1, wildcat in 11-23-10w. On initial flow it produced 92 barrels per day on a 3/16-inch choke. Gravity of the oil is 38.7.

☆ Arkansas

Columbia Well Is Tested; Union Project Abandoned

In the Haynesville field, Columbia County, Midstates Oil Corporation reperforated G. W. Taylor et al 1 from 5460-74 feet with 117 shots, and was preparing to acidize.

Hassie Hunt Trustee and Tide Water Associated Oil Company. Seaboard Oil Company set 5½-inch casing at 8273 feet and perforated at 8267-71 feet at Pittman-Sanders 1.

In the Stephen-Smart field J. F. Smart D-4 is testing. It swabbed 5 barrels of oil per hour.

Union County: Root Refining Company abandoned Union Sawmill 2 at 6379 feet.

Wildcats: Vincent Trabucco is on location at Charles Henderson 1, Benton County. McAlester Fuel Company is preparing to squeeze the Couch-Staggs 1 at a total depth of 6795 feet. Vincent Trabucco is also on location at the newly staked E. M. Berta Tucker 1, as is the Arkansas-Oklahoma Gas Company at the T. O. Blankenship 1, south and west of the northeast corner of 2-7-30. Both wells are in Sebastian County. The Marine Oil Company was swabbing the L. G. McGough 1, C NE NW 34-17-13, in Union County.

☆ Mississippi

Heidelberg Fields Have Two New Producers

Eucutta pool leads activity in Mississippi; 2 new producers registered for Heidelberg fields; Baxterville well tests 170 barrels of oil in 12 hours; Mississippi wildcats report few shows.

Wayne County: The Eucutta field continued to show most activity with 13 wells drilling and 2 successfully completed during the week. Humble Oil & Refining Company's Masonite Corporation 1, SWc 8-9n-8w, was completed with an initial production of 68 barrels of 21-gravity oil per day from perforations opposite the Eutaw at 5152-70 feet. Magnolia Petroleum Company's W. W. Reynolds 2, NW NE SE 18-9n-8w, was brought in, pumping 145 barrels of oil in 24 hours. John C. Robbins' Bessie Finley 1, NEc SW 18-9n-8w, was swabbed in and put on the pump after it reached about 5250 feet in the Eutaw zone. The hole had been whipstocked when it was found to be 2½ degrees off at bottom. Tide Water Associated Oil Company's J. S. Wheeless 1, NEc NE SE 12-9n-9w, was installing pump after a reported flow of 55 barrels of oil per day from a drill-stem test at 5228-30 feet. Bottom hole foot pressure was 2126 pounds.

Jeff Davis County: Humble's J. H. Williams & Sons 1, 13-7n-18w, Tuscaloosa prospect, was drilling below 6150 feet with no shows reported. The last drill-stem test, reported at 3251-83 feet with ¼-inch top and bottom chokes open 19 minutes, made considerable salt water and mud while cores taken a little further up the hole recovered sand and shale with porosity not reported. Electrical log has been run to 5705 feet.

In the Gwinville field Gulf Refining Company's A. L. Norwood 1, SEc NE SE 28-9n-19w, topped the Cockfield strata at 1440 feet and was waiting on cement after reaching a total depth of 1706 feet. The Superior Oil Company's Mrs. N. B. Dale 1, NEc SE 29-9n-18w, had top of chalk at 6660 feet and was drilling below 7160 feet with no shows indicated.

Lawrence County: Humble's V. L. Parkman 1, SWc 8-6n-20w, only active prospect in the county, recovered salt water in sand and shale from cores at 6824-73 feet. The well was tested at 6615-43 feet but made only mud and salt water. Total depth is below 6955 feet.

Jasper County: Gulf's Carrie Husband Unit "B" 1, SWc NE NW 29-1n-13e, East Heidelberg field, has been completed with an initial production of 113 barrels of 19.6-gravity oil per day. The well was swabbed in after encountering a small amount of salt water which will be treated out. Sinclair-Wyoming Oil Company's May Morrison 1, SEc SW 12-1n-12e, has been completed in the East Heidelberg area with an initial production of 161 barrels of 21.5-gravity oil per day. In the West Heidelberg field Gulf was unsuccessful in efforts with the Masonite "A" 5, SWc NW 36-1n-12e, which was abandoned at a total depth of 5660 feet in the Tuscaloosa zone. Driller had previously stuck drill stem and backed off with loss of several joints and collars at 5577 feet. Tests developed large amounts of salt water.

Lincoln County: Roeser & Pendleton's W. L. Case 1, SEc 8-7n-7e, Brookhaven field, is drilling below 7540 feet in black shale. The Wilcox horizon topped at 3735 feet has been cored extensively with no shows and electrical log run to 7429 feet.

Lamar County: Gulf's W. J. Howard 1, SEc SE NW 17-1n-16w, Baxterville field, has had successful drill-stem tests from the Tuscaloosa and Massive sand zones, recovering a considerable amount of oil. In a drill-stem test at 8783-8804 feet, the well flowed 170 barrels of 17.3-gravity oil in 12 hours on a 3/16-inch top choke. In a second test with packers at 8715 feet and 8752 feet, the well flowed 88 barrels of 17.2-gravity oil in 7 hours. Driller was preparing to reperforate and test further. Superior's R. Batson 3, NW NW NW 15-1n-16w, Gwinville pool, is drilling below 8372 feet in sand and shale. The well tested salt water at 7947 feet in the Tuscaloosa zone. Sun Oil Company's F. M. Snowden 2, SWc SW SE 6-1n-16w, topped chalk at 6492 feet and is drilling below 6550 feet with no shows reported.

Itawamba County: Greggtex Gasoline Corporation's R. L. Burdine 1, NW NE

SE 16-11s-9e, was preparing to set casing after reaching a total depth of 1213 feet. Oil shows were reported in lime at 1195-98 feet, and electrical log run.

Yazoo County: Holding interest is Union Producing Company's Stevens 21, 12-10n-3w, deep test in the Tinsley field which has picked up Smackover lime. A drill-stem test failed, due to mechanical difficulties, at 10,836-866 feet. The test was cored deeper and is credited with picking up a slight show of oil in Smackover lime at 10,866-875 feet. At last report, the test was coring in Smackover at 10,970 feet. A producer in the lime would create a new drilling campaign in this area.

Georgia

Harry Byers' Dean 2, NW of C of Land Lot 127, Land District 3, Wayne County, was abandoned at 500 feet.

Toombs County: Tropic Oil Company's Gibson 1, 4½ miles southwest of Lyons, was still shut down and waiting on orders at 3625 feet. The well reported a rainbow showing of oil and gas bubbles on pit and a stain of oil in sand from 3305-25 feet. Three drill-stem tests have been unsuccessful.

Alabama

With 2 failures for the week and several wells still shut down, a decline in work in Alabama is noticeable; 3 new tests getting under way.

Bullock County: Capitol Oil & Gas Company's Pickett 1, SE NW 22-13n-21e, was abandoned in granite wash at 2522 feet.

T. M. McLendon's J. L. Harris 1, C SE SW 12-12n-22e, is drilling below 1730 feet.

Escambia County: Hunt Oil Company's T. R. Miller Mill Company 3, C SW SW SW 32-3n-11e, was abandoned at 5731 feet, but has not yet released the log.

Choctaw County: The Carter Oil Company has taken out permit to drill Sam Allman 1, NE SW 5-10n-3w, east of production in the Gilbertown field which has been steadily developing of late.

Green County: J. L. Cates' J. A. Steele, Trustee 1, NW SW 6-21n-2e, was rigging up rotary.

Wilcox County: Southern Natural Gas Company's W. Morgan, Jr. Estate 1, C SE SE SW 32-12n-5e, was preparing to move in at its location.

Clark County: The California Company's Scotch Lumber Company 1, C NE SW 25-10n-1w, Alabama's only other actively drilling wildcat, is below 2596 feet in black shale with no shows reported.

Florida

Humble Oil & Refining Company's Gulf Coast Realties Company 4, 20-48s-30e, Florida's second producer in the Sunniland field of Collier County, has been put on the pump and an initial production test made. The well pumped slightly more than 132 barrels of oil and about 113 barrels of salt water in 24 hours. Production is from open hole at 11,560-597 feet, total depth. A later test gauged 398 barrels of fluid—251.78 barrels of oil and the remainder salt water, a considerable increase in both oil and salt water over the previous gauge.

Humble has finished rigging up rotary tools at Gulf Coast Realties 7, C SW NE 17-48s-30e, a deep test for the Sunniland field, which is planned to

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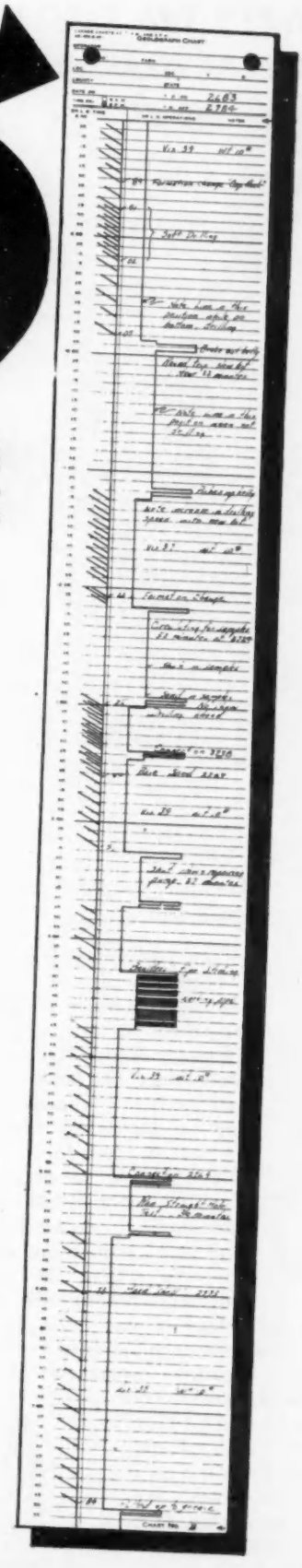

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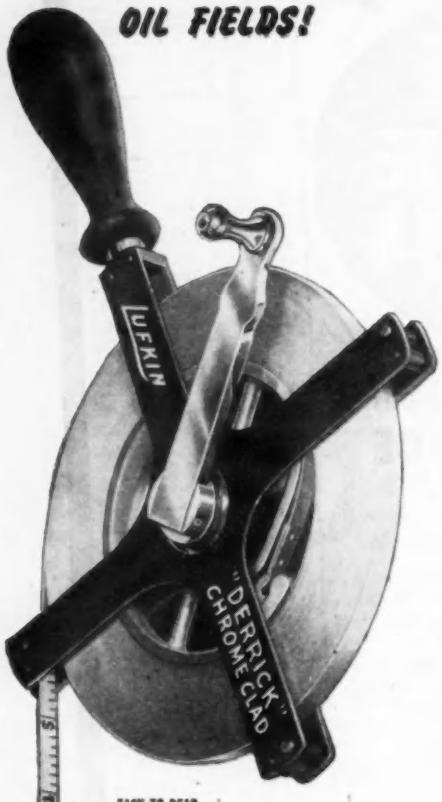

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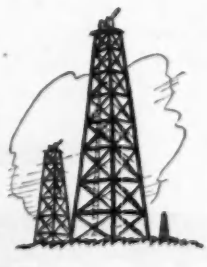

LUFKIN FOR ACCURACY

reach the 11,500-foot zone. It is 68 feet in lime and shell.

Charlotte County: Humble's Lownes-Treadwell 1-A, C of S SW NE 17-42s-23e, is drilling below 3223 feet in dolomite.

Highlands County: Same company's G. S. Carleton Estate 1, C SW NE 34-28s-29e, deep test, is below 9409 feet in hard dolomite and is waiting on a drill-stem test. Results of a core taken from 9397-9402 feet have not been revealed.

Monroe County: O. D. Robinson's State 1, NEc NW 29-59s-40e, is fishing for tools at 6058 feet.

☆ Illinois Basin

Carter Has Discoveries In Kentucky and Indiana

Carter registers discoveries in Kentucky and Indiana; Coles County, Illinois, project prepares to test saturation in Cypress.

Kentucky

The Carter Oil Company gave the St. Vincent pool, Union County, a slight northwest extension and new pay horizon at Weldon 1, 21-P-20. The pool formerly produced only from the McClosky lime, but during a drill-stem test of Aux Vases sand at 2452-64 feet, the well made gas in 15 minutes and 450 feet of oil in 75 minutes. Pay also was recovered in the McClosky at 2536-38 and 2550-57 feet, the latter figure total depth.

Indiana

Carter's discovery in this state was Cox 1, NW NW SE 14-7s-14w, 1½ miles south of the Mt. Vernon pool, Posey County. Pay was found in the Tar Springs sand at 2770-92 feet and during a 3-hour drill-stem test at 2079-92 feet, the well yielded 720 feet of oil and 60 feet of oil-cut mud. With pipe set at 2072 feet, the company was preparing to drill plug for production test.

Illinois

Howard Gordon and others' Brining 1, NE NW NE 3-11n-7e, a prospective discovery 1½ miles southwest of the Mattoon pool in Coles County, was drilling plug to test saturation in the Cypress sand at 1794-1809 feet and Aux Vases sand at 1942-67 feet. The well is ¾ mile southwest of Carter's 5-year-old discovery, Seaman 1-A, a lone producer. Carter has offset acreage to the Gordon venture .

Richland County: J. W. Carter's Borah 1, NW NE NW 20-2n-10e, 2 miles south of the Calhoun pool, pumped 225 barrels of oil in 24 hours during initial test of McClosky lime at 3199-3202 feet. The discovery had 3000 gallons of acid.

Michigan Well Brought In

Wicklund Development Company's Hein 1, wildcat in SE SE SE 13-15n-6w, Broomfield township, Isabella County, between the Deerfield and Broomfield shallow gas pools, flowed and swabbed at an estimated rate of 50 to 75 barrels of oil per day from the Traverse at 5156 feet, following 1000-gallon acid treatment.

☆ Rocky Mountain Area

Western Colorado Wildcats To Resume Operations

Two Colorado Western slope wildcats to resume operations.

Little Poose Creek: Isadore Spangler's 1, C N½ SW SE of 21-3n-88w, wildcat test on Little Poose Creek, Rio Blanco County, northwestern Colorado, was preparing to resume drilling operations from a depth of 277 feet. where it has been standing for some time. Surface formation on Little Poose Creek is the Dakota sandstone. Location is about 4½ miles northwest of Phillips Petroleum Company's location for its deep test on Poose Creek proper, which is expected to spud soon.

Axial Basin: Under an agreement with Karr & Greer, C. L. Price, Wyoming operator, will test the Sundance in a well on Axial Basin, Moffat County, Colorado, which Karr & Greer drilled to a total depth of 2317 feet. The well has been standing idle for about a year. Location is in C SW NE of 24-5n-94w. Minor showings of gas were reported in the upper part of the hole.

☆ California

Union Oil Has New Field In Los Angeles County

Union Oil Company discovers new field in Los Angeles County with 125-barrel pumper; gas blow-out adds to checkered history of unpredictable Costa Mesa area; approval of exploratory program for Elk Hills Naval Reserve needed to increase field's potential.

Los Angeles County: Union Oil Company has discovered a new oil field of probably limited area between Whittier and La Habra. Its Sansinena 15 in 30-2s-10w was completed on the pump for 125 barrels daily of 22.9 gravity oil, 0.4 percent cut and 89,000 cubic feet of gas. Production is from the Middle Puente formation (Upper Miocene) through perforations from 3591 to 3346 feet. The discovery culminates a persistent exploratory campaign extending over several years. Union Oil, which owns mineral rights on a stretch of 4 or 5 miles between Shell Oil Company's Columbia lease and the Murphy ranch, has already started drilling Sansinena 16, about 1½ miles from its discovery well.

Orange County: Barnhart - Morrow Consolidated's Meyer 1 in the Karales area of the Costa Mesa field, 18-6s-10w, blew out from a depth of 1170 feet with dry gas blow estimated at 5 to 7 million cubic feet. The flow ceased after four days and operator is now repairing derrick. Blow-outs of this character are not uncommon in the Lower Pleistocene and Upper Pliocene of the Los Angeles Basin, but to date the shallow gas sands have never proved to be commercial. The blow-out in Meyers 1 occurred well above where the operator hopes to top the oil sand. Marked by a pronounced structural displacement, the area has been somewhat baffling to drillers, as no one well seems to correlate with any other.

Kern County: Elk Hills completions,

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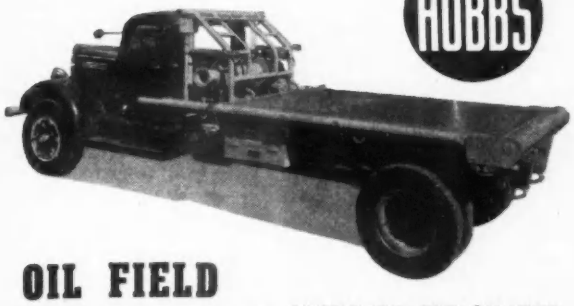

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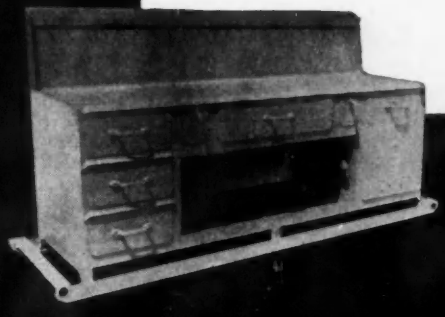

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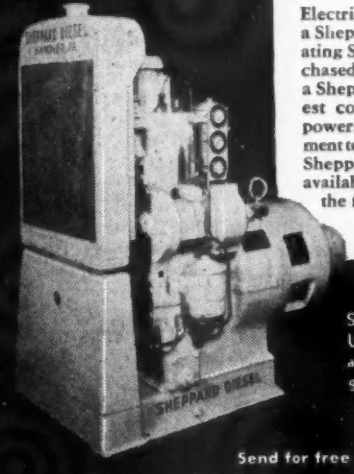

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which have been running along at the rate of 3 or 4 per week, have been sufficient to maintain the 65,000 barrels daily average which the House Naval Affairs Committee recently approved for continuance until the end of next year.

About 120 proved shallow zone locations remain to be drilled under the existing program. An outpost well, 62-2B in 2-31-23, was abandoned last week by Standard Oil Company of California, operating the field for the Navy, when a formation test recovered only oily, gassy mud.

Union Oil has started Kernco 34-12, outpost of the South Coles Levee field. The well falls outside the acreage which participates in the unit plan of operation in this field and will be watched with considerable interest.

Standard's deep test of the Lost Hills field, Cahn 58-4 in 4-27-21, was drilling below 10,600 feet in gray sand with streaks of shale after formation tests of the interval between 10,390 and 10,450 feet failed to reveal anything of interest.

Solano County: In an area that has been well regarded ever since Amerada discovered gas near Dixon in its Starkey Fee 1, Shell is preparing to start a new test for gas. The well will be known as Hamburg-Treadwell 1 and location is in 36-6n-1e, about 10 miles northwest of the Rio Vista gas field.

Production High Reached

Another new high for California crude production was recorded in the second 10 days in June, when output averaged 949,281 barrels per day, according to California Conservation Committee figures. This was 2281 barrels daily over the state's June production quota of 947,000 barrels. The record is taken as an indication that California producers have a good chance to meet their July quota which PAW boosted 5000 barrels to 952,000 barrels daily.

☆ Canada

Alberta Plains Devonian Project Is Madison Strike

Well intended as Devonian test makes commercial oil strike in overlying Madison, providing first Madison discovery on Alberta Plains; successful northeast extension completion made in Conrad field; third oil well success indicated in Saskatchewan's Lloydminster field.

Princess Madison Discovery: Empire-Pacific 1, lsd 1 27-19-12w4, designed as an initial test of a Devonian Dolomite Dome outlined by seismograph, has obtained oil in apparently commercial volume in the Madison limestone about 800 feet above the original objective. The strike is the first important Madison showing on the South Alberta Plains, although earlier ventures have obtained some oil and gas showings in the formation, usually accompanied by water. While a definite decision has not been reached, it is likely the present well will take production from Madison, with rig going to an adjacent location for drilling to original Devonian objective.

Empire-Pacific 1 topped the Madison limestone at 3309 feet and drilled to 3320 feet, cuttings from the contact showing porosity and oil showing up in the mud. A drill-stem test was made, and oil with a small cut of mud, no formation water, rose 630 feet in the 4½-inch drill pipe. A three-foot core was then taken to 3323 feet, with further porosity evident. Another formation test, with packer set at the lime contact, showed a 720-foot oil rise in 1 hour, plus a gas flow of slightly over 25,000 cubic feet daily. No formation water was evident. The oil is 28 degrees or higher, and has no sulphur odor. The gas is sweet.

Conrad Extension Success: Standard Oil Company of California, boosting its score to 4 successes out of 5 completions in the South Alberta Plains' Conrad area the past month, has a good producer at Conrad-Province 17-5A, SE 10 acres lsd 16 5-6-15w4. The well topped the Ellis (Jurassic) sand at about 3118 feet and halted coring at 3124 feet. A drill-stem test with packer set at 3114 feet gave a 1380 feet rise of gassified oil in 1 hour. Seven-inch casing has been set and the well was being readied for pump. The well is an important northeast extension test, ¾ mile north of the original discovery, ¼ mile east of the recent success (Conrad-Province 37-5A), ¼ mile south of Mid-Continent-East Crest 3, outpost well which found the Ellis too tight to yield commercially. Oil tests about 27 degrees.

Devonian Test for Foothills: Highwood-Sarcee Oils, Ltd., will deepen in search of Devonian limestone at the old Pekisko Hills 1 well, lsd 6 6-17-2w5, on the Highwood Uplift 6 miles south of Turner Valley. The well has been bottomed at 4400 feet since 1936, with Madison limestone topped at 1308 feet, and Banff shale at 3600 feet. Gas flows totaling 2½ million cubic feet daily were obtained in the Madison and Banff, with a show of 35-gravity oil in the lime at 3145 feet. Rotary was being installed for deepening. The well is expected to go about 1500 feet.

Saskatchewan: Community Services 4, lsd, 9 10-49-29w3, on the Saskatchewan side of the Lloydminster oil and gas area, has indicated commercial oil production in the Lower Cretaceous, the third such success in the Province of Saskatchewan. The well topped objective sand at 1865 feet, with 4 feet of saturation to 1869 feet, 7 feet of shale to 1876 feet, and 6 feet of oil-saturated sand to completion depth of 1882 feet. Seven-inch casing has been set at 1875 feet, shutting off the upper portion of sand, believed to contain considerable gas.

Outlook is regarded comparable to results obtained at National-Grant 1, Saskatchewan's first oil well, ⅜ mile north (reported pumping 30-35 barrels daily since going on production March 14), and S. A. C. Oils 1 a mile south, which went on pump June 15 with initial production of 70 barrels daily. Oil is heavy black.

Abasand Plant Burns

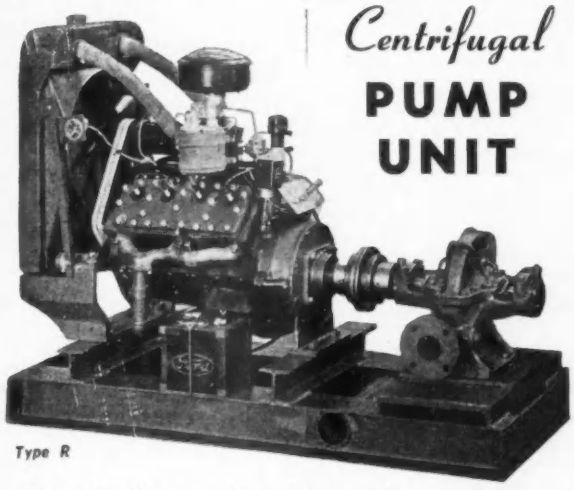
Efforts to develop a commercial process for extraction of oil from the McMurray Tar Sands along the Athabaska River in Northern Alberta have been set back by a fire of unknown origin which caused an estimated $300,000 damage to the Dominion Government-backed Abasand Oils plant and equipment.

The fire destroyed the 500-barrel-per-day capacity experimental separation plant, machine and pipe shops and other equipment. The 500-barrel capacity refinery was saved.

LOCKETT-WORTHINGTON

Centrifugal

PUMP UNIT



Type R

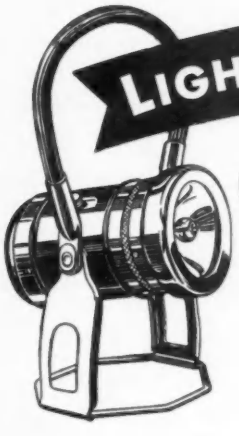
FOR high efficiency, dependability and low maintenance cost, you can't buy a better pump than a Worthington. Lockett Dealers — from warehouses located at, or near, the principal oil fields of Texas and Louisiana, backed by a large replenishing stock at our Houston and New Orleans Warehouses — can supply Worthington Pumps to meet every pumping need; also, *genuine* Worthington Repair Parts.

Worthington Pumps are adaptable for use with engines or motors of any specified type or manufacture, to provide a complete pumping unit.

A. M. LOCKETT & COMPANY, LTD.

NEW ORLEANS HOUSTON DALLAS

LIGHTING SAFETY FOR OIL MEN



with the EMPIRE

"Focal-Ray" Lantern

MODEL No. 940-UL

Listed and Approved by Underwriters' Laboratories, Inc. Report No. E-14729

For SAFE LIGHT in dangerous places, rely upon this safety-approved "Focal-Ray" Lantern. Precision built with the safety requirements of the oil man in view.

Features like the safety light socket that ejects broken bulbs, the spark-proof construction, and instant beam-to-flood adjustment, "high spot" Focal-Ray advantages for oil field use.

NOW Available for immediate delivery. No priority required. Ask your supply distributor—or write for catalog.

- ★ Special Socket — ejects broken bulbs.
- ★ Exclusive focal adjustment—a beam to a floodlight at turn of lens head.
- ★ Flexible directional beam.
- ★ Easy-grip handle.
- ★ Wireless sliding switch.

THE METAL WARE CORPORATION

TWO RIVERS, WISCONSIN

Pioneer manufacturer of UL listed and regular lanterns

Quick Clean Threads

with these tough little steel-and-malleable

RIDGID

RATCHET THREADERS

No special dies needed for close-to-wall threads

● Snap in the size die head you want—from either side, it can't fall out—and you're ready to cut smooth clean threads from ⅛" to 1¼"—quickly, easily. The heat-treated toolsteel dies are beautifully precision-cut and individually tested. A handy feature is the easy reversal of dies to thread close-to-wall pipe—no special dies needed. Smooth internal ratchet, strong malleable drive ring. Buy 0R and 11R threaders . . . at your Supply House.

Handy carrier with any combination of sizes.

RIDGID

WORK-SAVER PIPE TOOLS

THE RIDGE TOOL COMPANY · ELYRIA, OHIO, U. S. A.

EXPLORATORY COMPLETIONS

ALABAMA WILDCATS

Bullock County—Failure: Capital O&G Co.'s Fred Pickett 1, nec se sw 22-13n-21e, abnd 2522 ft.

Escambia County—Failure: Hunt Oil Co.'s T. R. Miller Mill Co. 3, sw sw sw 32-3n-11e, abnd 5731 ft.

ARKANSAS WILDCATS

Ashley County—Failure: Placid Oil Co.'s Crossett Lbr. Co. 1, c ne se 34-17s-9w, abnd 5508 ft.

Ouachita County—Failure: Sohio's S. B. Block 1, c nw ne sw 20-14-16, abnd 2824 ft.

CALIFORNIA WILDCATS

Glenn County—Failure: Richfield Oil Corp.'s Capital Co. 1, 16-21n-1e, Chico area, Basalt 1874 ft, base 1924 ft, Eocene 1952 ft, Cret 2528 ft, abnd 4500 ft.

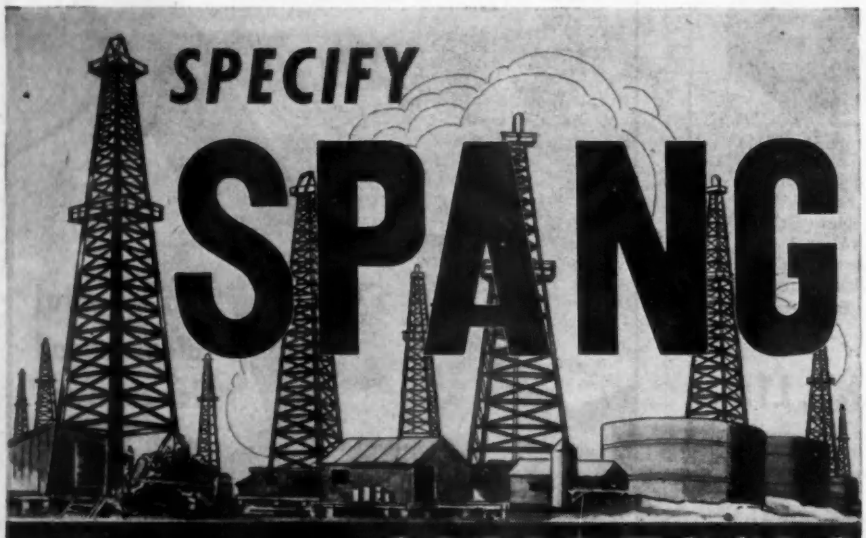
Fresno County—Failure: Oceanic Oil Co.'s Maxfield 1, 32-20s-15e, Coalinga area, Upper Variegated 3264 ft, spotty oil stains, 3285-3394 ft, abnd 3394 ft.

Kern County—Failures: General Pet. Corp.'s Kernsumner 8-27, 27-30s-28e, Weedpatch area, abnd 7797 ft.

Independent Exploration Co.'s Salt Creek 65-A, 17-29s-21e, Carneros 3635 ft, abnd gray sd 3678 ft.

Glen H. Mitchell's S. P. 1, 33-26s-28e, Mt. Poso area, top Schist 2410 ft, abnd 2510 ft.

Rothschild Oil Co.'s Jasmine 25-1, 25-25s-27e, Jasmine area, Pyramid Hills 1840 ft, Vedder 1968 ft, weathered granite 2116 ft, wet oil sds 1915-45 ft, 1968-2048 ft, abnd 2171 ft.



FOR THE BEST IN CABLE TOOLS

Fig. F460 Fig. F467

SPANG
CENTER ROPE SPEAR
(Fig. F460)
THREE-PRONG GRAB
(Fig. F467)

For fishing broken cable and sand line, Spang furnishes a variety of Center and Side Rope Spears, as well as Two- and Three-Prong Grabs.

Strands of cable left attached to the rope socket may be removed with the Spang Drill Mill, or the Spang Drive Down Socket or Trimmer.

For the best in Cable Tools,
SPECIFY SPANG

THE HIGHER STANDARD

SPANG & CO.
BUTLER, PA.

YOUR DEALER SELLS SPANG TOOLS

U. S. Drilling Co.'s S. P. 33-1, (was called S. P. 1, 33-26s-28e, Mt. Poso area, Vedder 1646 ft, abnd gray sd 1900 ft.

Los Angeles County—Oil Discovery: Union Oil Co.'s Sansinena 15, 30-2s-10w, La Habra area, perf 3346-3591 ft, pump 123 bbls 22.9-gr oil, 0.4% wtr, 89 mln gas, fr Middle Puente sd, td 3591 ft.

San Luis Obispo County—Failure: Geo. A. Taylor-Ben Rankin's Coral 1, 6-25s-16e, Cholame area, abnd 876 ft.

ILLINOIS WILDCATS

Clinton County — Oil Discovery: William Murphy's Noller 1, ne ne ne 28-2n-1w, Buch 1279-86 ft, pump 23 bbls, td 1286 ft.

Hamilton County — Oil Discovery: Tide Water's Johnson 1, se se nw 33-6s-5e, Aux Vases 3228-60 ft, pump 33 bbls, td 3486 ft.

Lawrence County—Failures: J. S. Young, Jr.'s Lewis 1, sw sw se 17-2n-13w, abnd 2837 ft.

Parriott & Sprowls' Warner 1, nw ne sw 24-5n-12w, abnd 1257 ft.

Marion County—Failures: Standard Drlg. Co.'s Kuntsman 1, sw se ne 9-1n-4e, abnd 3008 ft.

Sam D. Jarvis' Hawkins Comm 1, se sw ne 35-1n-1e, abnd 2509 ft.

Perry County — Failure: Magnolia's Armstrong Heirs 1, sw ne sw 8-6s-3w, abnd 1699 ft.

Washington County — Failure: H. S. Williams' Koelling 1, se nw nw 3-1s-1w, abnd 1500 ft.

Wayne County—Oil Discovery: Magnolia's Borah 1, sw sw sw 4-1s-9e, Rosi 3343-47 ft, pump 5 bbls, td 3362 ft.

Wayne County—Failures: Nash Redwine's Crews 1, se se se 6-2s-9e, abnd 3396 ft.

J. W. Sheridan et al's Knapp-Tulley 1, ne nw sw 23-2n-5e, abnd 3045 ft.

White County—Failure: Jarvis Bros.-Marcell's Hoskins 1, nw nw sw 31-6s-9e, abnd 3345 ft.

INDIANA WILDCAT

Vanderburg County—Failure: Kingwood Oil Co.'s Field 1, se se ne 13-4s-10w, abnd 2222 ft.

KANSAS WILDCATS

Barton County—Failure: Royer Farris' Meyer 1, nw ne se 32-20s-11w, Lans 3156 ft, Cong 3392 ft, Arb 3463 ft, abnd 3473 ft.

Butler County—Failure: Skelly's Starkey 1, se se ne 33-28s-7e, Lans 1760 ft, Miss 2820 ft, abnd 2859 ft.

Kingman County — Failures: Vickers Pet. Co.'s Carrick 1, sw sw nw 26-30s-8w, Miss 4296 ft, Vi 4646 ft, Simp 4690 ft, Arb 4816 ft, abnd 4853 ft.

B&R Drlg. Co. et al's Carter 1, nec 1-30s-10w, Kind 4327 ft, Vi 4477 ft, Simp 4535 ft, Arb 4648 ft, abnd 4698 ft.

Phillips County—Failure: Texas Co.'s Mai 1, ne nw ne 26-5s-19w, Arb 3616 ft, abnd 3650 ft.

Reno County—Failure: Hershfield & Co.'s Duepser 1, nec 7-24s-7w, abnd 4185 ft.

Sumner County — Failure: John Winters' Butterworth 1, nw ne 31-32s-2e, abnd 3775 ft.

Trego County—Failure: Continental's Strat 33, nw se 25-15s-21w, abnd 4150 ft.

KENTUCKY WILDCAT

Hopkins County—Failure: G. B. Pratt's Mrs. Wright 1, sw se ne, abnd 1098 ft.

NORTH LOUISIANA WILDCATS

Bienville Parish—Failure: Placid Oil Co.'s Nebo Oil Co. B-2, 24-15-7w, abnd 7839 ft.

Madison Parish—Failure: Roy L. Fisher et al's Westmoreland 1, 27-17-11e, abnd 4340 ft.

Webster Parish—Oil Discovery: Hunt Oil Co.'s Mrs. O. G. Roberts 1, 1980 fr nl 1969 fr wl 11-23-10w, perf 5734-44 ft, 2000 gals acid, flowed 45.44 bbls 38.7-gr in 3/16-in in 12 hours, cp 890 lbs, tp 250 lbs, td 11,765 ft, pb 5744 ft.

SOUTH LOUISIANA WILDCATS

Acadia Parish—Failure: Danciger O&R Co.'s Julius Frey 1, begin sec sect 40 go n 35° 55 mins w for 4350 th s 54° 05 mins w for 615 to lcn in 40-7s-1w, abnd 9980 ft.

Calcasieu Parish — Failure: Arkansas Fuel Oil Co.'s Louisiana State Lse 521-1, 2996 e of wl 5092 n of sl sect 28-10s-13w, Turner's Island area, abnd 9514 ft.

MICHIGAN WILDCATS

Allegan County—Failures: Guy Wray's Sisson 1, se nw ne 15-2n-16w, abnd 1298 ft.

Fortney and Harris' Sutter 1, sw sw sw 35-3n-13w, abnd 1590 ft.

Tamblyn Dev. Co.'s Parker 1, sw ne sw 20-1n-11w, abnd 1515 ft.

Arenac County—Failure: American Dr. Co.'s Curriston 1, sw nw nw 26-20n-5e, Dundee 2803 ft, abnd 2963 ft.

Lake County—Failure: V. I. Cilley's Peiser 1, w½ nw nw 13-18n-12w, Dundee 3438 ft, abnd 3540 ft.

Livingston County — Failure: Panhandle Eastern Pipe Line Co.'s Addison 1, w½ nw nw 11-3n-3e, abnd 4846 ft.

Mecosta County—Failure: Pure's Meyer 1, nw nw sw 30-14n-10w, abnd 2992 ft.

Montcalm County—Failure: Allegan Pipe & Supply Co.'s Greenwald 1, ne ne ne 22-10n-7w, abnd 3315 ft.

Newaygo County—Failure: Michigan Consol. Gas Co.'s Chapman 1, c sw 29-16n-11w, abnd 1511 ft.

Osceola County—Failure: Fisher-McCall Oil

The OIL WEEKLY'S TRADING POST

USED EQUIPMENT FORUM

CLASSIFIED ADS . . . EQUIPMENT . . . SERVICES . . . PERSONNEL

FOR SALE

Three Steam Rotary Rigs Less Drill Pipe

No. 1

3—125-300 Kewanee Boilers
1—No. 78 Johnson RB Drawworks
1—5 Sheave Type B Regan Crown
1—4 Sheave RB Traveling Block
1—B-6 Emsco Swivel
1—DA Emsco Rotary Table
2—7¼ x 18 Johnson Mud Hogs
2—10 x 4½ x 10 Worthington Boiler Feed Pumps—All Other Equipment to Rig Up.

No. 2

4—125-250 Acme Boilers
1—No. 78 Johnson RB Drawworks
1—5-Sheave Type B Regan Crown
1—66" Johnson Traveling Block
1—9" Union Tool Hook
1—B-6 Emsco Swivel
1—DA Emsco Rotary Table
2—7¼ x 18 Johnson Mud Hog Pumps
2—10 x 4½ x 10 Worthington Boiler Feed Pumps—All Other Equipment to Rig Up.

No. 3

3—125-300 Kewanee Boilers
1—No. 78 Johnson RB Drawworks
1—5 in Line Crown
1—66" RB Traveling Block
1—8" Union Tool Hook
1—B-6 Emsco Swivel
1—DA Emsco Rotary Table
2—7¼ x 18 Johnson Mud Hog Pumps
2—10 x 4½ x 10 Worthington Boiler Feed Pumps—All Other Equipment to Rig Up.

All the above rigs are complete in every detail and all Boilers will pass Oklahoma Inspection. Address: **Phil A. Cornell**, 1331 S.E. 29th St., Capitol Hill Station, Oklahoma City, Oklahoma

■ FOR SALE: Power Drilling Rig with 4½" Oil Well Drawworks and 5 x 12 Gardner-Denver Pump both with brand new 145 HP Waukesha Motors never been run. Address: Box 40, c/o The Oil Weekly, Houston, Texas.

■ FOR SALE: PA-100 International motor, overhauled and in excellent condition. Box 247, Owensboro, Ky.

■ FOR SALE: Re-built TXO Hercules motor, still in factory shop at Salem, Illinois. Good as new. Box 247, Owensboro, Ky.

■ FOR SALE: New TXA Hercules motor block with parts to re-build this motor. Price of block for all. Box 247, Owensboro, Ky.

■ FOR SALE: No. 5½ Keystone Spudder International motor, complete two strings tools capacity 1800 feet. This spudder was bought new in 1944 and only operated six months. Address: Howard Thomas, Baxter Springs, Kansas.

NIXON GAS LIFTS

10 Complete units, used but in good condition. Price below ceiling. Located Gladewater, Texas.

BERT FIELDS

Magnolia Bldg. Dallas, Texas

Phone LD-609

2—60,000 barrel riveted steel tanks with new steel tops and structural steel supports, thickness ¾" to 5/16".
1—15,000 barrel welded closed steel tank.
2—10,000 barrell welded closed steel tanks.
1— 7,500 barrel welded closed steel tank.
1— 5,000 barrel riveted closed steel tank.
1—Parkersburg SC 11 pumping unit, stroke 5' to 11' in excellent condition. At a bargain price.

Jos. Greenspon's Son Pipe Corp., National Stock Yards, St. Clair County, Illinois.

FOR SALE

■ FOR SALE: Used "Welderz Frend" acetylene gas generators. I buy and recondition. W. B. Mackey, 6509 Hillsboro St., Houston, Texas. Phone W-7714.

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■ Reliable oil company urgently needs combination surveyor-permitmen on seismograph crews. Good pay. Post war security in essential industry. Write P. O. Box 96 or apply 1425 Union Ave., Bakersfield, California.

■ WANTED: Driller, experienced on Sullivan hydraulic core drill. Location, Rocky Mountains. Address: Box 35, c/o The Oil Weekly, Houston, Texas.

■ Wanted by a consulting geophysical organization, Petroleum Engineers with Hayward Mud-logging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancement to managerial positions throughout the world. Address: Box 45, c/o The Oil Weekly, Houston, Texas.

■ WANTED: Production Superintendent for Texas Gulf Coast and North Louisiana. Prefer a man with engineering background. Address: Box 50, c/o The Oil Weekly, Houston, Texas.

WANTED
Comptroller

Long established California drilling contractor has excellent opening for man with experience in drilling business who can qualify as Comptroller. Reply in full stating age, education, experience and salary wanted. Address: Box 55, c/o The Oil Weekly, Houston, Texas.

ENGINEER-WRITER WANTED

An immediate, permanent position is open on The OIL WEEKLY editorial staff for men capable of preparing articles describing new or improved oil field operating methods and equipment. Work highly interesting and educational; includes combination of office and travel duties, and an unusual opportunity to see new things and meet people. Location in Houston office.

In addition to ability to meet people and to write publishable articles on oil field drilling and producing operations in simple understandable language, requirements include: knack of recognizing new operating techniques and "wrinkles," use of camera and typewriter, and personal car.

State education, age, oil field experience, writing experience, and salary expected above traveling and car allowance. Address: The Editor, The Oil Weekly, Box 2608, Houston 1, Texas.

SITUATION WANTED

■ WANTED: Job as pilot. 1227 flying hours. Commercial license rated from 225 to 6240 horsepower. Donald Feahr, 3347 Meadowbrook Blvd., Cleveland Hgts., Ohio, YE 1186.

■ Just returned from a year's foreign work, 20 years engineering experience, 12 of it in oil and gas construction, production, operation and measurement in Texas and Louisiana fields. Graduate C.E. References available. Address: Box 56, c/o The Oil Weekly, Houston, Texas.

WANTED TO BUY

■ WANTED TO BUY: One ditching wheel only, capable of digging a ditch 4 feet deep and 15 inches wide. Address: A. R. Wurtele, Mix Post Office. Louisiana, or telephone New Roads, Louisiana, 2232.

■ WANTED: Shot Hole Rig for use with Seismograph outfit. Box 670, Fort Worth, Texas.

■ Wanted to Buy: Spudder capable of drilling 4500', calfwheels ready for work, give details. W. R. McMaster, Box 103, Gaspe, Quebec, Canada.

Co.'s Cool 1, s½ se sw 5-19n-10w, Dundee 3729 ft, abnd 3850 ft.

Otsego County—Failure: Sun's Hanson 1, c ne 20-29n-4w, Antrim 1629 ft, abnd 1940 ft.

Saginaw County—Failure: Rowmor and Wilsons' Malone 1, se ne se 7-12n-3e, Dundee 3274 ft, abnd 3614 ft.

Van Buren County — Failures: Clapsaddle Dr. Co.'s Dammeffel 1, se ne nw 18-4s-16w, abnd 995 ft.

C. E. Grime's Way 1, se se sw 35-1s-13w, abnd 1300 ft.

MICHIGAN OUTPOST

Missaukee County — Prosper Field Failure: Gordon Oil Co.'s State A-1, sw ne se 15-22n-6w, Dundee 4026 ft, abnd 4039 ft.

NEW MEXICO WILDCAT

McKinley County—Junked: Plymouth Oil Co.'s Santa Fe 1, 2188 snl 330 ewl 13-15n-10w, Dakota 1150 ft, Morrison 1330 ft, Navajo 1490 ft, Keyenta 1700 ft, Todilto 2200 ft, jkd and abnd 2995 ft.

OKLAHOMA WILDCATS

Beckham County—Gas Discovery: Skelly et al's Baldwin 1, se ne ne 10-9n-25w, Granite Wash 6787-6810 ft, flow 22 mln gas, sip 2300 lbs, td 7559 ft.

Kay County—Failure: Prunty Prod. Co.'s Hogemeyer 1, nw nw ne 28-28n-3e, Osw 2902 ft, abnd 3288 ft.

Lincoln County — Failure: Fred Morgan's Youts 1-A, nw se sw 8-15n-4e, abnd 3987 ft.

Payne County—Oil Discovery: Northern Ordnance's DeWitt 1, ne sw sw 34-20n-4e, Misener sd 3569-75 ft, pump 35 bbls 33-gr oil, 35 wtr, td 3585 ft.

Pottawatomie County — Failure: Stanolind's Teas 1, ne se nw 9-9n-4e, abnd 4830 ft.

WEST TEXAS WILDCATS

Bailey County—Failure: El Paso Nat. Gas Co.'s West Texas Mortgage & Loan Co. 1, 695 nsl 660 ewl sect 55, blk A, Melvin, Blum & Blum sur, elev 3945 ft, abnd in granite 9104 ft.

Gaines County—Failure: Humble's W. Eubank-Humble 1-B, 660 ewl 3300 snl PSL 6, blk AX, elev 3371 ft, abnd 7645 ft.

Glasscock County—Failure: Union of Cal.'s Edmondson 1, c sw sw W&NW Ry. 210, blk 29, elev 2549 ft, lime 3380 ft, abnd 4101 ft.

Tom Green County—Failure: Texas Co.'s Edwards 1, 1980 snl 660 ewl e½ S.P. Ry. sect 58, dist. 11, elev 1880 ft, Ellenburger 5295 ft, Cambrian sd 5905 ft, abnd 5955 ft.

Howard County—Failure: Cosden Pet. Corp.'s Read 1-A-40, ne ne ne T&P Ry. 40, blk 30, T-1-N, elev 2419 ft, abnd 4238 ft.

Pecos County—Failure: Sun's Davis 1, 1050

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RENTAL TOOLS

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10,000 ft. 2½" External Upset, Internal Flush Drill Pipe.
8,500 ft. 2½" Regular Acme Range 1 Drill Pipe.
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2½", 3½", 4½" & 6" Kellys, Drill Collars, Swivels, Rotary Tables, Power Pumps, Crowns, Traveling Blocks, Hooks, Drilling In Tools, & Blowout Equipment.
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TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, The Oil Weekly
P. O. Box 2608 Houston 1, Texas

wel 2400 nsl H&GN Ry. 105, blk 8, elev 2468 ft, anhydrite 906 ft, abnd 1559 ft.

Winkler County—Junked: Stanolind's Sealy-Smith 7, c sw sw G&MMB&A sect 10, blk A, jkd and abnd 1061 ft.

WEST CENTRAL TEXAS WILDCATS

Coleman County — Failure: Ungren & Frazier's McDaniel 1, 330 snl 1740 wel HT&B Ry. 26, elev 1641 ft, Adams Branch 1062 ft, abnd 1793 ft.

Jones County—Failure: Ungren & Frazier's Collins 1, 330 out sec lot 26, E. P. Warren & G. A. Kirkland subdvn of DeWitt CSL sur No. 149, elev 1768 ft, abnd 3006 ft.

SOUTH CENTRAL TEXAS WILDCATS

Cameron County—Failure: Magnolia's Armendaiz 1-B, 4950 fr s&wl 5591.21-ac lse, Ojo de Agua Gr, abnd 9616 ft.

Guadalupe County—Failure: Wiegand Bros. Drlg. Co.'s B. R. Ussery et al 1, 150 fr ely nel 150 fr sly nwl 500-ac lse, W. G. Hunt sur, Chalk 2090 ft, Buda 2302 ft, Del Rio 2327 ft, Georgetown 2340 ft, Dobie 2430 ft, Edwards 2437 ft, abnd 2484 ft.

SOUTHWEST TEXAS WILDCATS

Jim Hogg County—Failure: Bridwell Oil Co.'s Isabel R. de Guiterrez 1, 330 fr el sur 164 and 217.4-ac lse, 330 fr sl lse, abnd 4012 ft.

McMullen County—Failure: Humble's E. M. Baker 2, 660 fr n&wl M. F. Lowe sur 4, abnd 8440 ft.

Starr County — Gas Discovery: Panal Oil Co.'s Lillie May Baird 1, 1300 fr sl 330 fr el sh 4-A and 50-ac lse, porc 82, perf 30 shots 1134-44 ft, flow 4,800,000 gas, open, shut in, td 1713 ft.

UPPER TEXAS COAST WILDCATS

Harris County—Failure: H. C. Cockburn's W. R. Reid 1, 330 fr n&el 176-ac lse, 1820 fr sl 330 fr el T. S. Lubbock sur, elev 69 ft, abnd 4092 ft.

Harris County — Condensate Discovery: Josey-Druton's David Rorick, Jr., 1, 660 fr s&el se se sect 31 HT&C sur, 640-ac lse, perf 40 shots 7040-48 ft, flow 87 bbls 55-gr oil, 5,874,000 gas, ¾-in. gor 67,429/1, tp 1887 lbs, cp 2157 lbs, td 7556 ft.

Wharton County—Failure: H. C. Cockburn's T. M. Neal-C. Davis 1, 900 fr nl 1600 fr el 532-ac lse, J. Smith and McKenzie sur, s of Magnet fld, elev 80 ft, abnd 6232 ft.

UPPER TEXAS COAST OUTPOST

Wharton County—Egypt Extension: Hudgins, Ferguson and Hutchins' F. B. & Donald Duncan 2, start sly sec Alexander Edgar sur go 7750 n alg wly el 1800 w at ra, 2750 n of No. 1, 3000-ac lse, sand 2828 ft, perf 16 shots 2834-36 ft, flow dry gas, no gge, tp 1150 lbs, cp 1200 lbs, td 2865 ft.

WESTERN CANADA WILDCAT

Central Alberta Plains—Edgerton Failure: Edgarton Oils' No. 2, lsd 3 20-43-4w4th, Devonian Dolomite 2460 ft, oil saturation in cores 2620-37, 2664-88 ft, abnd 2688 ft.

EAST TEXAS BORDER COUNTIES WILDCATS

Harrison County—Distillate Discovery: Ark-La Gas Co.'s F. A. Baker 1, L. G. A. Steele Sur, 6½ mi sw of Waskom, flow 92.7 bbls 55-gr dist, 116.3 bbls sw, est 9,656,000 gas, gor 104,000/1, rock pressure 2095 lbs, td 6783 ft.

Nacogdoches County—Failure: Allen Whiteside's R. D. Smith 1, Vital Flores sur, 170-ac lse, 6 mi e of Nacogdoches, abnd 1210 ft.

EAST TEXAS WILDCAT

Nacogdoches County—Failure: Allan Whiteside et al's Smith 1, 3800 wel 3750 fr m/s/sl Vital Flores sur, abnd 1200 ft.

NORTH TEXAS WILDCATS

Archer County—Failures: F. P. Timberlake-H. M. Kelleher's Wilson-McCrory 1, 3460 snl 1790 wel of H&TC Ry Sur A-403, or 150 out nec lot 629, abnd 1637 ft.

Jack Wilder Dr. Co.'s Duckworth 1, 1821 snl 150 wel blk 4, J. W. Harris subdvn, abnd 1495 ft.

Clay County — Failure: Staley Oil Co.'s Schaffer 1, 150 out sec 64-ac, or 490 ewl 1700 nsl A. McGowan & Butler sur A-519, abnd 1351 ft.

Cooke County — Oil Discovery: Hollandsworth Dr. Co.'s W. A. Mathews 1, 330 out nec 74-ac tr, or 1400 ewl 330 snl of Robt. Ekey sur A-357, elev 885 ft, pump 80 bbls, sand 1543-48 ft.

Cooke County — Failures: Benson Bros. et al's Flietman 2, 330 out sec blk 6, Thos. Scott sur A-900, abnd 2074 ft.

Horwitz & Oldom's Havercamp 1, 330 snl 1850 e of m/w/wl of Wm. Nelson sur A-794, elev 707 ft, detrital 1894 ft, Ellenburger (solid) 1915 ft, abnd 1921 ft.

Cottle County—Failure: S. D. Johnson et al's Smith 1, 330 snl 1777 wel of 194-ac lse, w½ sect 34, T. A. Thompson sur A-837, elev. 1780 ft, abnd 6000 ft.

Denton County—Failure: Albert Beck-Carl Johnson et al's Newton 1, 900 snl 330 ewl of 135-ac tr in se part N. Coker sur A-249, abnd 2355 ft.

Jack County—Failure: Continental-Sinclair Prairie's T. H. Cherryhomes 1, 990 snl 3630 ewl John Irvin sur A-313, elev 1116 ft, Bend 5386 ft, Ellenburger 6606 ft, abnd 6728 ft.

Wichita County—Failure: Frank Wood-Closuit & Waggoner's Burnett 1-B, sect 16, H&GN Ry. A-436, abnd 2100 ft.

WILDCAT STARTS

CALIFORNIA

Los Angeles County: Seaboard Oil Co.'s Evans 2, 23-3n-16w, lcn.

Superior Oil Co.-British American's Handy 1, 18-4n-17w, deep test, lcn.

Orange County: D. D. Dunlap's 1, 18-6s-10w, lcn.

Kern County: Pacific O&G Dev. Corp.'s Hogan 1, 20-24s-18e, lcn.

Richfield oil Corp.'s Tejon A 25-7, 7-10n-19w, foundation.

Solano County: Shell's Hamburg-Treadwell 1, 36-6n-2e, lcn.

ILLINOIS

Bond County: J. H. Callahan's Copeland 1, ne nw nw 19-4n-4w, lcn.

H. M. Miller's Grey 1, ne ne se 19-5n-4w, lcn.

Fayette County: Dale Hopkins' Bandelow 1, nw sw ne 25-7n-3e, lcn.

Jefferson County: Ryan Oil Co.'s Young 1, ne se ne 33-1s-4e, lcn.

Madison County: B. F. Thompson's Reynolds 1, nw ne sw 36-4n-6w, lcn.

Marion County: A. J. Hammer et al's Meador 1, nw ne nw 25-1n-4e, lcn.

Perry County: Magnolia's Hon Est. 1, ne ne nw 34-6s-2w, lcn.

Richland County: W. W. Shaffer et al's Iverson 1, sw ne se 23-3n-9e, dr 227 ft.

White County: Ray Johnston's Carr 1, ne ne nw 20-4s-10e, drlg.

INDIANA

Gibson County: Clarence Woods' Boren 1, ne ne ne 4-4s-11w, lcn.

Posey County: Carter's Cox 1, nw nw se 14-7s-14w, dr 377 ft.

KANSAS

Butler County: Western Pet. Exp. Co.'s Craft 1, sec 14-29s-7e, dr 160 ft.

Greenwood County: J. F. Enright et al's Mitchell 1, se sw sw 21-24s-11e, dr 1525 ft.

Ness County: Chalmette Pet. Corp.'s Bowman 1, nw nw ne 31-19s-25w, lcn.

Pawnee County: Darby & Bothwell's Faulkner 1, sw sw 11-22s-16w, lcn.

Stanolind et al's Benson 1, nw ne nw 30-23s-15w, lcn.

Phillips County: Denver Oil Co.'s Mueller 1, cse se 9-3s-19w, lcn.

KENTUCKY

Hopkins County: Sun's Black Star Coal 1, 2-H-24, dr 389 ft.

Kentucky Nat. Gas Co.'s Sisk 1, 9-J-21, lcn.

McLean County: Miller & Shiarella's Pinkston 1, 19-N-27, dr.

Union County: Carl Sneff's Hammock 1, 17-M-20, dr 276 ft.

NORTH LOUISIANA

Bienville Parish: Arkansas Fuel Oil Co.'s Woodard-Walker 1, 660 ft n & 664 ft e of swc of sw¼ 32-17n-7w, lcn.

West Carroll Parish: F. Kirk Johnson's J. B. McIntosh 1, 330 ft n & 393 ft w of se c of se¼ of ne¼ 4-22-10e, lcn.

SOUTH LOUISIANA

Allen Parish: Humble's Mrs. J. A. Bell et al 1-B, start nec sect 33 go wly alg nl 1980 th sly at ra 660 to lcn in 33-5s-4w, 10,500-ft test.

MICHIGAN

Allegan County: W. Spencer Cook's Clock 1, se se sw 34-2n-12w, dr.

Kent County: Michigan Devonian Pet. Co.'s Petaucher 1, se se se 34-6n-12w, lcn.

Montcalm County: Leslie T. Barber's Gyger 1, w½ se nw 1-11n-7w, dr.

Osceola County: Lupher Dr. Co.'s Kessinger 1, se se nw 5-18n-10w, rig.

Schoolcraft County: Carl E. Christensen's Christensen 1, ne sw se 13-42n-16w, dr.

Allegan County: A. J. Boeve's Fleming 1, se nw nw 35-3n-16w, lcn.

Clare County: Turner Pet. Co.'s Luce 1, s½ nw sw 5-18n-5w, dr.

Genesee County: H. H. Heinig's Elliott 1, w½ nw se 12-9n-8e, dr.

Isabella County: Columbia O&G Co.'s Fox 1, n½ nw se 16-13n-5w, dr.

Kalamazoo County: W. D. Gannett's Kinney 1, sw se ne 28-3s-12w, lcn.

Mecosta County: Ohio Oil Co.'s Gas Unit 1, c se 33-15n-10w, dr.

Montcalm County: Allegan Pipe & Supply's Greenhoe 1, nw nw se 28-10n-6w, dr.

Montmorency County: E. R. Morris' Wiggins 1, sw sw ne 29-30n-4e, lcn.

MISSISSIPPI

Greene County: Warren Pet. Co.'s A. J. Smith 1, nwc 11-4n-6w, lcn.

Stone County: Superior's Wilbe Lbr. Co. 1, n&e swc se se 20-3s-10w, lcn.

OKLAHOMA

Carter County: Lundy & Morgan's Cox 1, c sw nw 36-1s-2w, lcn.

Cotton County: Wayne McCormick et al's Menz 1, sec nw 35-4s-12w, rur.

Okfuskee County: J. A. Chapman's Fee 1, nw nw se 5-12n-7e, rog.

WEST TEXAS

Borden County: Texas Co.'s J. A. Phillips 1, c sw ne T&P Ry. 2, blk 32, T-3-N, mim for 3800-ft San Andres test.

Crockett County: Lion Oil Ref. Co.'s M. S. Neal 1, 1980 ewl 660 nsl E.L. & Ry. Co. sect 66, 2¾ mi n by e of 9916-ft Ellenburger failure, mim for 10,000-ft Ellenburger test.

Pecos County: Dave Elder et al's J. H. Tippett 1-A, ne ne se GC&SF Ry. 46, blk 194, 2000-ft test.

Runnels County: Barron Kidd-A. W. Cherry's M. E. Fowler 1, 990 nsl 330 ewl E.T. Ry. sect 150, 2 mi ne Ballinger, 4000-ft cable test.

E. S. Price et al's B. N. Wilke 1, 330 nsl 5101 wel of Day Ld & Cattle Co. sur No. 1, 3500-ft cable test.

Upton County: Cole, Gruver & Coburn's Starnes-Superior 1, 440 out nec sw GC&SF Ry. 1, blk W, 2500-ft cable test.

Yoakum County: Gulf's J. Frost 1, c nw nw sec 35, blk D, J. H. Gibson sur, 3½ mi e by s of pending disc, rur for 5100-ft San Andres test.

WEST CENTRAL TEXAS

Taylor County: West Central Drlg. Co.'s N. D. Teaff 1, 330 wel 1800 nsl of 115-ac tr, or 5350 ewl 1800 nsl of Jose Gabo sur No. 128, 2500-ft cable test.

SOUTHWEST TEXAS

Duval County: Haynes B. Ownby Drlg. Co.'s J. T. Dinn 1, 330 fr sl 990 fr el AB&M sur 458 and 80-ac lse, 3500-ft test.

McMullen County: Santa Clara Oil Co.'s Volney M. Brown et al 1, 660 fr wl 506.6 fr nl sect 10, R. H. Brown sur, 6500-ft test.

Zapata County: Ralph E. Fair's Santiago & Francisco Cuellar 1, 293 fr nw&sel blk 14 934.6 fr swl blk 14, porc 36 sh 4 180-ac tr, otd 3006 ft, washing down to deepen.

LOWER TEXAS COAST

Karnes County: Union Prod. Co.'s M. Schaefer 1, 467 fr se&swl 367.4-ac lse, LPIA&M Co. sur, 6500-ft test.

Kleberg Conuty: Sohio Pet. Co.'s Kleberg & Rosse 1, 345 fr nl 316 fr el blk 4 KT&I subdvn sect 40, Ricardo area, 8500-ft test.

Victoria County: Seaport Oil Corp. et al's J. J. Welder 1, 1066 fr wl 660 fr nl 380-ac lse, Day Ld & Cattle Co. sur, lcn.

UPPER TEXAS COAST

Chambers County: Butcher-Arthur's 1st Nat. Bank of Goose Crk 1, 330 fr nl of lse 330 w of road e of well, 6 mi ne Goose Crk, 8000-ft test.

Ft. Bend County: Texas Co.'s Mason Briscoe 1, 330 fr s&wl 250-ac lse, 3.6 mi se Fulshear, 9000-ft test.

EAST TEXAS BORDER COUNTIES

Marion County: Jefferson Oil & Gasoline Co.'s J. M. De Ware Jr. et al 1, 1209.6 fr el, 1320 fr sl of 140-ac tr, Reuben Bennington sur, 1½ mi n of Jefferson.

Panola County: J. I. Roberts-C. H. Murphy Jr.'s, E. Johnson et al 1, 330 fr s&wl of lse in Messer Fain sur, 1½ mi n Midyett Len.

NORTH TEXAS

Archer County: C. L. Abercrombie-Frank Wood's C. L. Abercrombie 2, 750 nsl 150 wel of blk 82, J. W. Harris subdvn, 1500-ft rotary test.

E. P. Bowen et al's C. L. Abercrombie 1, 1260 nsl 150 wel of sw¼ blk 70, J. W. Harris subdvn, 1450-ft rotary test.

Grace & Grace's W. J. McClure 1, 850 wel 1320 snl blk 13, Crawford Pasture subdvn, 1350-ft rotary test.

Clay County: L. T. Burns et al's M. N. Garrett 2, 2296 nsl 450 wel BBB&C Ry. sur A-100, 2½ mi nw Antelope, 6000-ft Ellenburger test.

Jack County: J. M. Bloodworth et al's Fee 1, 1650 nsl 463 ewl H&GN Ry. sect 2, A-1851, sd 320 ft.

J. M. Bloodworth et al's Fee 2, 1850 nsl 555 ewl H&GN Ry. 2, A-1851, machine for 350-ft test.

Throckmorton County: Bridwell Oil Co.'s J. H. Lee 1, 150 out nec TE&L Co. sect 2352, 1000-ft test.

Young County: Hedrick Oil Co.'s Paul C. Haygood 1, 750 w 275 n of nwc sect 1461, but in TE&L Co. sect 3401, 1000-ft rotary test.

WESTERN CANADA

South Alberta Plains—Wrentham: D. & B. Syndicate's No. 1, se 10 ac of lsd 1 29-5-17w4th, dr.

Central Saskatchewan—Torch River: Torch River Syndicate's White Fox 1, lsd 5 14-52-15w2nd, rig.

SQUEAKS from the BULL WHEEL

Labeled but Not Priced

"Would you live with a stranger if he paid you $100,000?" the lawyer asked the pretty defendant.

"Yes."

"Would you live with him if he paid you only $25?"

"Certainly not! What do you think I am?"

"We've already established what you are," came back the lawyer. "Now we are trying to establish to what extent."

This Curious World

Girls want a lot these days—and some of them even want a house on it.

The rhumba is a dance in which the front of you goes along nice and smooth like a Cadillac, and the back of you quivers like a jeep.

Some people have no respect for age—unless it's bottled.

Ladies, the best way to keep your youth is to avoid introducing him to another girl.

"That's the guy I'm laying for," muttered the hen as the farmer went by.

Running after women never hurt anybody—it's catching them that does the damage.

Pretty Close

"You say that gorgeous woman is your best girl?"

"Nope. My neck's best."

Well Done

Sailor A: "Our ship is so big the captain travels around the deck in an airplane."

Sailor B: "That's nothing. The galley on our ship is so big the cook has to go through the Irish stew in a submarine to see if the potatoes are done."

Definitions

Poker: A game in which a good deal depends on a good deal.

Pin-up girl: A slick chick with a lot of rooster boosters.

Will power: The ability to stop after eating one salted peanut.

'Bye, 'Bye, Baby

Delighted Daddy: "What will we call him?"

Moderate Mama: "Quits!"

Badder the Gooder

Visitor: "And how is the good wife?"

Sultan: "Fine, but the others are more fun."

Poet's Nook

Here lies the body of Corporal Stark:
He mistook the Sarge for a girl
in the dark.

Encore

Many a romance is battered and bruised
When dancing slippers meet GI shoes.

He Said It

"Daddy, why was Adam made before Eve?"

"To give him a chance to say a few words."

Holy Smoke

"How did you break your leg?"

"Threw my cigarette into a manhole and stepped on it."

Tapering Off

"Beer, please."

"Pale?"

"Nope, just a glass."

Sloppy Job

"Are you the man who saved my little boy from drowning?"

"Yes, madam."

"Well, you big lug, where's his hat?"

Philosogrin

Gals who keep on slapping faces
Don't see no sights or go no places.

Territory Explored

"Gosh, you have a beautiful figure."

"Oh, let's not go all over that again."

The End

Elsie was a moo-moo cow
More athletic than mudderly.
She hopped a barbed wire fence
And was destroyed—udderly.

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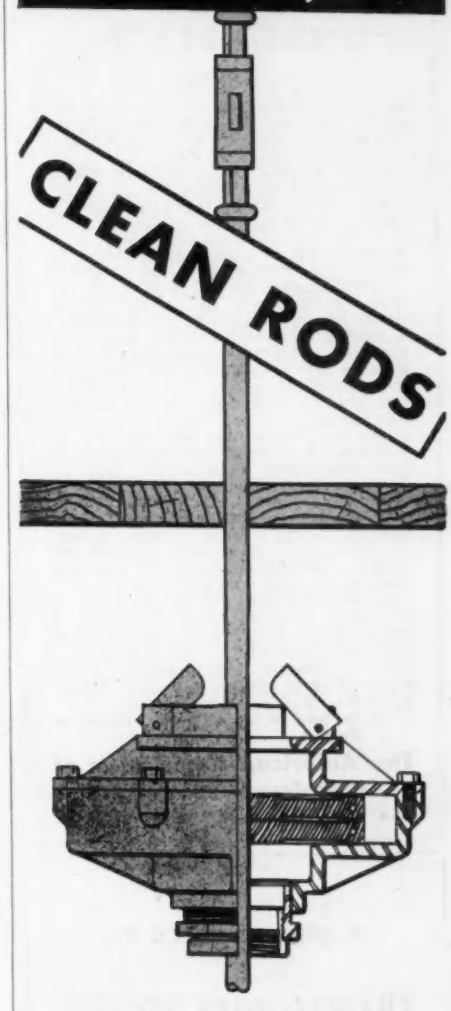

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TECTONIC MAP
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1944

Prepared under the Direction of the Committee on Tectonics, Division of Geology and Geography, National Research Council.
Chester R. Longwell, Chairman, Philip B. King, Vice-Chairman.
Charles H. Behre, Walter H. Bucher, Eugene Callaghan, D. F. Hewett, G. Marshall Kay, Eleanora B. Knopf, A. I. Levorsen, T. S. Lovering, George R. Mansfield, Watson H. Monroe, J. T. Pardee, Ralph D. Reed, George W. Stose, W. T. Thom, Jr., A. C. Waters, Eldred D. Wilson, A. O. Woodford.

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ON PAGE 79 OF THIS ISSUE

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MEN IN THE INDUSTRY NEWS

Sam Harlan, assistant executive and member of the board of directors, Cities Service Oil Company (Delaware), has been elected a vice president of the company. **Judge A. M. Ebright,** chief counsel for the company, has been elected to the board, and **J. M. Nisbet,** vice president and member of the board, has resigned and moved to California.

Sam Harlan

Harlan is a native of Texas and joined the company as junior engineer in 1924. In 1929 he was appointed engineer in the Bartlesville office of the Oil Production Division and was appointed assistant manager of production in 1939. At the time of the Indian Territory Illuminating Company merger he was appointed assistant executive and in 1941 was elected to the board.

Judge Ebright joined the company as chief counsel in 1937, succeeding the late **Judge J. W. Finley.** Previously he was engaged in general practice in Wichita, Kansas, and had served as district judge for Sedgwick Conuty, Kansas.

Lee Burris of The Texas Company has been transferred from the production department in Illinois to the scouting department in the Shawnee, Oklahoma, district.

Gus A. Davis, chief clerk in the office of **Gov. Robert S. Kerr** of Oklahoma, has resigned, effective July 1, to join Kerlyn Oil Company.

Joe Gillen, formerly with the production department, The Atlantic Refining Company at Seminole, Oklahoma, has been named district scout for the company in the Shawnee, Oklahoma, district.

C. W. Board, director of the Oklahoma State School Land department, has resigned, effective August 1, after heading the department since 1924. Before leaving his post Board will recommend the adoption of an oil policy which would include establishing a map department, a well-record unit, and the employment of a gauger and possibly a geologist.

James Speake, formerly division manager for the Olson Drilling Company in the Illinois Basin area, has organized the Ideal Drilling Company with headquarters at Olney, Illinois.

V. F. Fuson has resigned as district landman for the British-American Oil Producing Company in the Illinois district and has moved to Fort Worth, where he will operate as an independent.

H. L. Eggleston, formerly with the Gilmore Oil Company, has been named manager of the gas department of General Petroleum Corporation and will also continue to manage the manufacturing activities of the Gilmore Road Oil and Asphalt Company.

H. L. Eggleston

Other promotions announced by the company: **P. S. Magruder,** gas department manager, to assistant manager of manufacturing; **M. W. Kibre,** superintendent of the gas department at Vernon, to assistant manager of the gas department; **H. A. Sting,** gas engineer at Vernon, to superintendent of the gas department, southern division; **A. C. Lyles,** from chemist at the Santa Fe Springs gas laboratory to gas engineer there; **Jack T. Hanafin,** from industrial lubrication engineer to contractor fuel and lubrication consultant for the southern division.

Major E. W. Krug has returned from an extended military leave of absence and has been reassigned to his former position as superintendent, southern division, of the Pan American Pipe Line Company. During Major Krug's absence, **John S. Cook** acted as superintendent. Cook will now serve as assistant to Major Krug.

Colonel Byron Rife, San Antonio, has been awarded the Legion of Merit. He is in command of two of the nation's largest munitions facilities, the Kankakee Ordnance Works, TNT, and the Elwood Ordnance Plant, loading of large caliber shells and bombs, Joliet, Illinois.

R. E. Wiggins, district landman for Amerada Petroleum Corporation in Southern Louisiana for 10 years with headquarters at Lafayette, has resigned to go into business for himself. He will continue to reside in Lafayette.

Elton Sterrett has been appointed executive secretary of the National Association of Corrosion Engineers, with offices in the Southern Standard Building, Houston. For the past five years Sterrett was on the editorial staff of THE OIL WEEKLY, and for nine years prior to that was assistant chief engineer for the Arkansas Pipeline Corporation at Longview, Texas.

Elton Sterrett

Stanley J. Anderson, treasurer, Ring Oil Company, has been elected president of the Petroleum Accountants Society, Los Angeles. Other officers are **Alfred F. Hagen,** Shell Oil Company, first vice president; **John P. Vezzetti** Sunset Oil Company, second vice president; **Kenneth Vandervort,** Amerada Petroleum Corporation, secretary-treasurer. Anderson succeeds **Charles K. Slack,** General Petroleum Corporation.

Raymond L. Dillard, Mexia oil operator, has been elected chairman of the Texas State Parks Board. **J. D. Sandefer, Jr.,** Breckenridge oil operator, was named vice chairman.

Dr. Robert R. Wheeler, chief geologist for The Superior Oil Company at Oklahoma City, has resigned effective July 1 to become chief geologist for the Eason Oil Company, Enid, Oklahoma, which is planning an active campaign in Oklahoma and Kansas oil areas.

H. S. Cole, Jr., has resigned as assistant to the manager, producing department of The Texas Company, effective July 1, and will join Thompson-Carr, Incorporated, Houston drilling contractors, as a vice president.

J. E. Buckley has been assigned to the Mt. Pleasant, Michigan, producing division of the Sohio Petroleum Company as district engineer. Buckley joined Sohio on May 24 after being with Phillips Petroleum Company in the Southwest for six years.

J. E. Reed, Union Oil Company's oldest employe in years of service and heretofore district drilling foreman, has been appointed drilling superintendent for the San Joaquin Valley (California) division.

Wendell Thayer has been made manager of Union Oil Company's newly-created wage and salary administration department. He formerly was assistant manager of employe relations.

John Elwood, general superintendent of the tractor manufacturing division of Caterpillar Tractor Company, Peoria, Illinois, since January, 1944, has been appointed assistant factory manager.

Thomas F. P. Kelly has joined Industrial Engineering Company as technical service engineer at the Bartlesville, Oklahoma, home office.

Ralph W. Boyd, formerly with Shell Oil Company, and **Leslie J. Bates,** formerly with Public Service Company, have joined the Walter O'Bannon Company, Tulsa, manufacturer of oil field equipment. Boyd has been named secretary-treasurer, and Bates will have charge of the company's research, mechanical and management engineering activities.

S. Riley Williams has been appointed director of international business for Worthington Pump and Machinery Corporation, with headquarters at Harrison, New Jersey. He has been with the company 25 years and has managed several foreign subsidiaries. A complete organization is now prepared to revive the company's international business interrupted by the war in Europe. Some Worthington representatives have already departed to reopen their offices on the continent and with the cessation of hostilities there, others are planning to leave shortly.

S. Riley Williams

Robert D. McManigal has been elected vice president of Westinghouse Electric International Company. He has been manager of the company's Associated Companies Department since 1940, with offices in New York.

He joined the Westinghouse Electric Corporation at Pittsburgh in 1915 and in 1922 was sent to Japan as an engineer for the Westinghouse Electric International Company. He served as managing director of the Westinghouse Electric Company of Japan until that firm's dissolution in 1931. Since then he has been, successively, manager of the Central Station-Transportation Apparatus Department, assistant to the vice president, and manager of the Associated Companies Department.

H. A. Hofflander, recently discharged from the Navy, has been placed in charge of the warehouse recently completed by Tulsa Boiler and Machinery Company at the West Tulsa plant. Before joining the service Hofflander was district sales representative of Sheffield Steel Corporation in the Rocky Mountain region.

W. C. Wadsworth of Westcott Valve Company has returned to Tulsa to make his headquarters after an absence of three years in East St. Louis, Illinois, company headquarters.

John E. Ricker has recently been appointed general superintendent at Kropp Forge Company, Chicago. He has had more than 20 years experience in metallurgical research and in all phases of forging production.

W. K. Womack, after a period of service in the United States Navy, now is stationed at Eunice where he is production foreman in Eastern New Mexico for Southern Petroleum Exploration, Inc.

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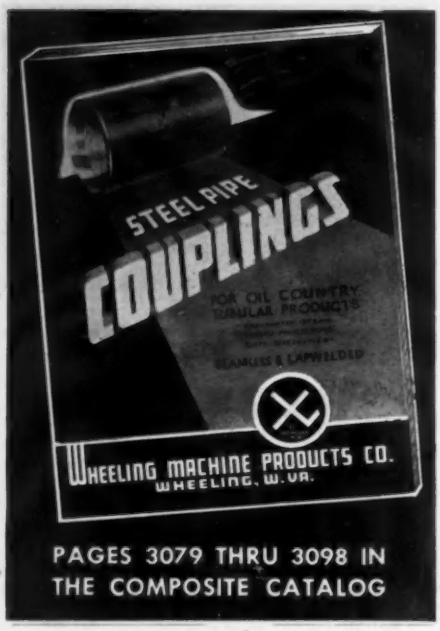

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MEN IN THE INDUSTRY NEWS

Edd R. Turner of Houston, first vice president of the Pan American Production Company, Pan American Pipe Line Company, and Pan American Gas Company, has been named general chairman of the fall campaign of the Harris County War Chest. Turner is a member of the supply and transportation committee of District 3, PAW.

E. E. Pyles, chairman of the California production committee, and **R. G. Whealton,** director of production, PAW District 5, were speakers at the semi-annual meeting of the California Conservation Committee at Bakersfield.

Major P. F. Goodman addressed the Petroleum Electric Luncheon Club in Tulsa on "Plans for the Arkansas River Basin Development."

Dr. Gunther Mohling, of Albany, New York, a scientist with the Allegheny Ludlum Steel Corporation, has been presented with a cash award and a certificate of appreciation by the board of directors for his contribution in the development of a series of high temperature alloys.

Carl F. Oechsle has been appointed vice president in charge of sales of Ransome Machinery Company, Dunellen, New Jersey, a subsidiary of Worthington Pump & Machinery Corporation. Headquarters of this subsidiary are in Holyoke, Massachusetts, where he will have his office.

H. M. Fisher has joined Foote Mineral Company, Philadelphia, as head of the grease research group. Formerly he was affiliated with The Atlantic Refining Company, Philadelphia.

Harry B. Williams, formerly with Petroleum Progress, Inc., in Houston, now is landman for Northern American Car Corporation, Chicago. His headquarters will be in the Alice area of Southwest Texas.

E. W. Johnson, former Tulsa representative for Joseph T. Ryerson & Son, has established an independent manufacturers' agency with offices at 211 East 27th Street, Tulsa, and will represent Super Steels, Inc., Chicago; Corey Steel Company, Cicero, Illinois, and the Sligo Iron Store Company, St. Louis.

H. W. Tenney, assistant to the vice president in charge of the Pittsburgh Division, Westinghouse Electric Corporation, and **Charles A. Scarlott,** edito to of the Westinghouse Engineer, have been awarded the Order of Merit, highest recognition for achievement given by Westinghouse. Tenney was given the award for his understanding approach to men and problems. Scarlott received the same recognition for his skill as an editor and writer in making technical articles interesting and understandable.

C. A. Patchin, scout for Tide Water Associated Oil Company in Oklahoma and North Texas, has resigned to join the land department of The Superior Oil Company.

James M. Bolding, formerly with the FBI and once a member of the Lone Star Gas Company land department, has joined **P. N. Wiggins, Jr.,** Dallas, independent operator.

Ernest Franks, manager of power-unit sales for Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, has been made director of sales of all wheel-type tractors for industrial purposes.

Daniel A. Herrick has been appointed manager of sales of d'Este Division of American Chain & Cable Company, with headquarters at Reading, Pennsylvania.

Deaths

George H. Mouser, retired oil operator of Perry, Oklahoma, died in Tulsa June 25. Mouser, 83, was a former United States marshal and made the run into Oklahoma in 1897, settling at Perry.

Charles B. Braden, Wichita, Kansas, died June 25. Braden, 59, was one of the early developers of the El Dorado, Kansas, pool. With his brother, **John Braden,** he drilled a large number of wells in Butler County. He was a native of Parkersburg, West Virginia, and moved to Wichita 16 years ago.

Keating Ransone, Houston independent oil operator, died June 22. Ransone, 50, was a newspaper man in Cleburne, Dallas, and Brownsville, Texas, before moving to Houston ten years ago to enter the oil business.

Thomas F. Hart, purchasing agent for Petroleum Machinery Corporation since 1937, died June 8 in Brooklyn. Hart, 57, was born in New York City.

G. Sidney Smith, Houston independent oil operator, died June 27. Smith, 43, was associated with Hebert and Smith, oil operators.

Lee Roy Sterling, 40, West Texas-New Mexico district production superintendent for the Phillips Petroleum Company, died June 13 in Odessa, Texas.

Herbert O. Koehler, Oklahoma oil man, died June 23. Koehler, 55, resided in Tulsa.

C. C. Eshelman, oil well shooter for the Independent Eastern Torpedo Company for 22 years, died June 25 in Tulsa. Eshelman, 59, had lived in Tulsa 25 years.

1—Portable Gravity Meter

North American Geophysical Company, Houston, is offering a gravity meter that can easily be carried by one man. Weighing only 28 pounds, it is temperature compensated, and the current required for maintaining the temperature is so low that a single motorcycle battery will keep it unaffected by outside temperature throughout the day. Weight of the entire assembly including the meter, back pack and battery, is only 45 pounds.

The back pack holds the meter so the outfit fits snugly on a man's back.

2—T-Ring Packing

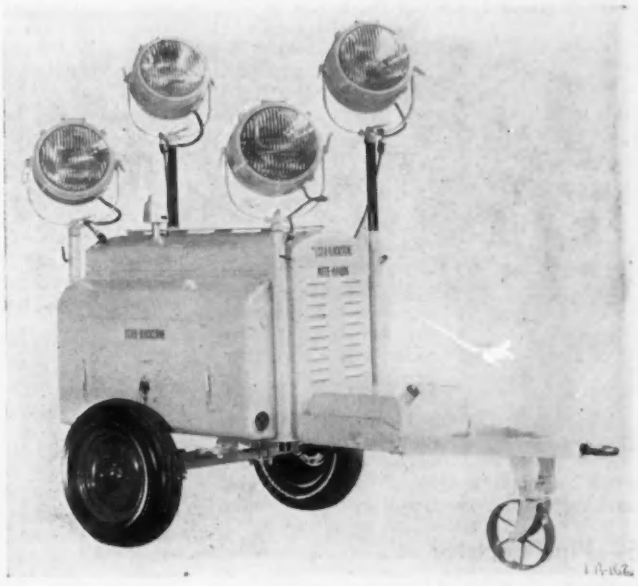
The Weatherhead Company, Cleveland, has developed a T-Ring Packing recommended for use as seals in cylinders, swivel joints, struts and numerous other applications including those where pressures are considerably above current practices. The packing has been tested at pressures up to 3000 pounds per square inch, with satisfactory results and tests encountered in field performance have been equally good, it is claimed.

The packing consists of a resilient sealing ring of synthetic rubber in a T-section backed up or supported on the side by two non-extrusion ring retainers or guards. These non-extrusion rings are split and are made of laminated phenolic material. The simple installation is such that the synthetic rubber member is under slight compression which provides the static seal.

When the operating pressure is increased the flange of the T-Ring packing expands radially against the non-extrusion rings, thus holding them in contact with the surface of the cylinder or piston rod. This action prevents the sealing material from being damaged by extrusion into the clearance space between the mating parts.

3—Portable Floodlight Unit

Lister-Blackstone, Inc., 1706 South 68th Street, Milwaukee, Wisconsin, has perfected a portable floodlight unit.



It is a fully self-contained source of light and fills the need where power lines are unavailable or where the connection and set-up would be too expensive.

The outfit is mounted on heavy-duty, multiple-leaf steel springs with two taper roller bearing equipped all-steel wheels. A retractable steel caster wheel provides support for the towing end when the outfit is parked. The assembly can be quickly hitched to a towing vehicle. The unit is available without running gear for truck mounting.

Power is supplied by an air-cooled 4-cylinder engine, equipped with an electric starter. A 5000-watt, self-regulating A.C. generator, connected to the engine, delivers steady current at 110 to 120 volts, the voltage being adjustable by means of a rheostat located on the control panel. A sheet steel enclosure with hinged side covers, houses the entire assembly, including large tool boxes.

Four 1000-watt wide-angle floodlights, one on each corner, cast beams in the same or different directions. Each light is individually operated from a control panel and is adjustable up and down and in all directions. The lights may be raised to a height of 8½ feet and swung in a 180-degree vertical arc. The outfit may be obtained with two 80,000 candle power floodlights and a 7 million candle power searchlight.

4—Analyzer

The Hays Corporation, Michigan City, Indiana, announces the development of a special analyzer for testing the high purity of oxygen, carbon dioxide, and nitrogen in the range from 90 to 100 percent.

It is of particular interest to the manufacturers of commercial oxygen and carbon dioxide but has many practical uses also in industrial processes.

It is offered in two styles—a wall mounted model for permanent installation and a portable model supplied in a neat metal case with leather carrying handle. It may be had with a single unit or with two units. A junior model (Series EJ) is also obtainable with a burette capacity of 30cc. The smaller model measures 6¼ x 9⅝ x 3¾ inches and weighs, fully charged, less than six pounds.

Use This Convenient Coupon for Additional Information

Check below the numbers identifying items on which you want additional information. Mail coupon to The Oil Weekly and your request will be forwarded to the manufacturer.

THE OIL WEEKLY

P. O. Box 2608, Houston 1, Texas, U.S.A.

Please have manufacturers send me, without obligation, more information on items shown in July 2 issue of The Oil Weekly as checked below:

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

In addition to information checked above, I would like more data on products or services advertised elsewhere in this issue by_____Company

Name_____Title_____

Company_____

Address or P. O. Box_____

City_____State_____

(To avoid delay print or type clearly name, company and mailing address)

5—Electrode Holder

Martin Wells, 5886 Compton Avenue, Los Angeles 1, California, has improved the Stubby model electrode holder designed to prevent slipping in the welder's mitt or glove when changing rods with an all-plastic, four-cornered collar.

The collar gives the holder these additional features, it is claimed:

Makes rod-changing easier and quicker, because it provides a positive convenient grip on the insulator.

Holds small rods upright and away from contact with work because corners of "mitt-grip" collar keep holder from rolling.

6—Pipe Locator

The E. D. Bullard Company, San Francisco, is marketing the Goldak pipe locator.

The device is a radio-type instrument consisting of two basic units. One unit transmits electrical impulses that activate the underground metal. The second unit detects the metal by recording the impulse it receives.

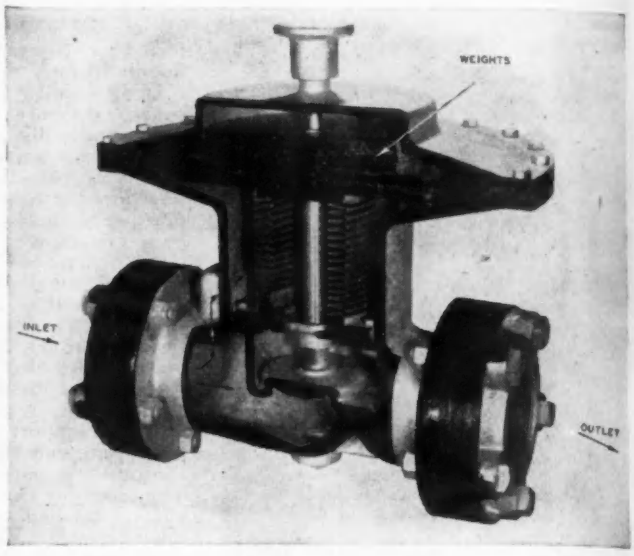
The manufacturer claims that accuracy of the locator permits determination of the size of underground pipes as well as the depth at which they lie.

8—Oil Seal Valve

Black, Sivalls & Bryson, Oklahoma City, announces production of a new pipe line oil seal valve which has been successfully field-tested in Illinois, Oklahoma, Texas, New Mexico and Michigan.

An outstanding feature of the product is its automatic action, requiring no manual setting with each run or manual venting of air before each run.

The new pipe line oil seal valves are also said to improve pipe line system efficiency by decreasing running time, eliminating air from system, lowering gathering station pumping costs, lowering field labor expense, eliminating gravity and volumetric losses caused by air being drawn into line, and also eliminating possibility of an air-locked system.

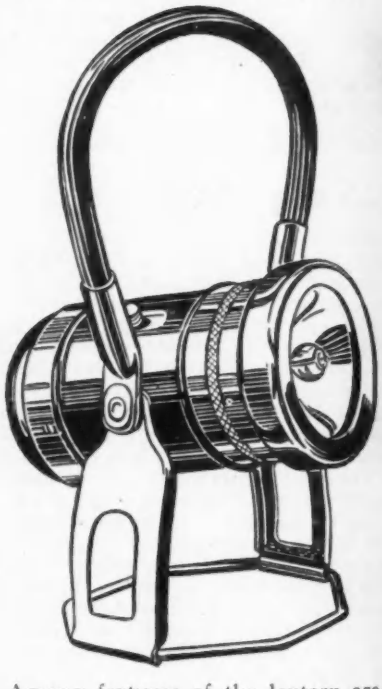


Use the Coupon

For free copies of Manufacturers' Literature or more information on products described on these pages, use the convenient mailing coupon on page 85.

9—Safety Lantern

Metal Ware Corporation, Two Rivers, Wisconsin, announces the Safety "Focal-Ray" Lantern, especially adapted for use in oil fields. Underwriters' Laboratories lists the lantern as safe for use in atmospheres containing explosive vapors.

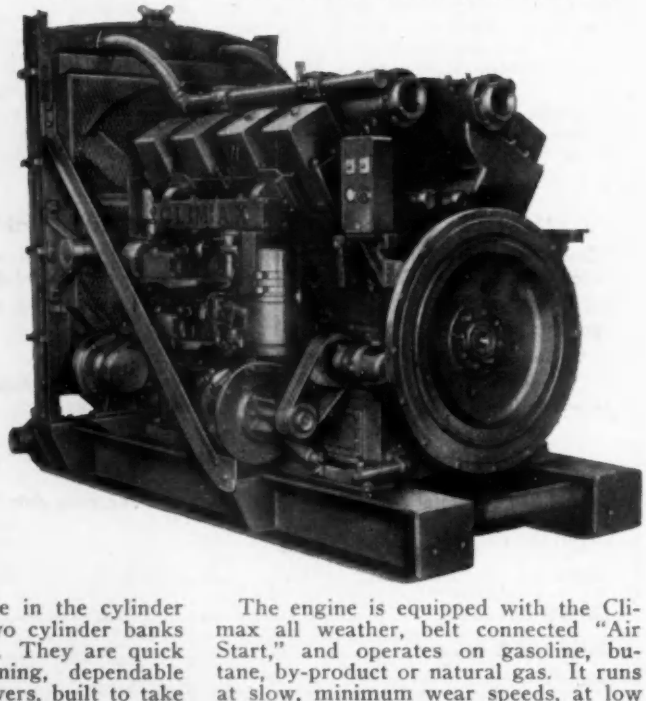


Among features of the lantern are a socket that immediately ejects broken bulbs, preventing spark hazard; focal adjustment that changes light from a concentrated beam to a wide flood at a turn of lens head; flexible directional beam; easy-grip handle; water-tight, wireless sliding switch; non-tarnishing, parabolic reflector; seamless, rust-proof body.

7—Engine

Climax Engineering Company of Clinton, Iowa, announces a new Climax Blue Streak Engine primarily designed to power oil well drilling rigs, generators and pumps. The new, compact, heavy duty V-8 will be known as the V-330. This designation indicates it develops 330 horse power at 1200 revolutions per minute without radiator and fan, but with all accessory equipment. As a drilling engine, it will be known as the VU-280, developing 280 horse power at 1100 revolutions per minute with radiator, fan and all auxiliary equipment.

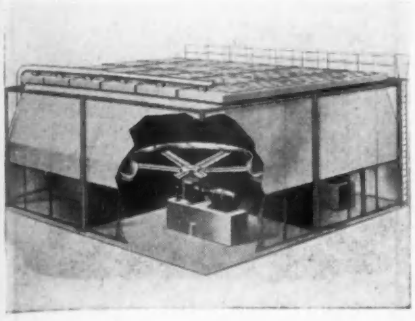
These engines are 8 cylinders, 4 cycle, with 6½-inch or 7-inch bore, 7-inch stroke. The valves are in the cylinder head and there are two cylinder banks of four cylinders each. They are quick starting, smooth running, dependable and flexible prime movers, built to take the hardest kind of industrial or field service for mobile or stationary equipment. Well balanced design, and heavy reinforced construction, are features.



The engine is equipped with the Climax all weather, belt connected "Air Start," and operates on gasoline, butane, by-product or natural gas. It runs at slow, minimum wear speeds, at low safe temperatures in all climates.

10—Cooling Unit

The Fluor Corporation, 2500 South Atlantic Boulevard, Los Angeles 22, California, has developed a cooling section which employs K-fin tube construction and which is cooled by forced draft



fed by air from the cooler layer at ground level and supplied by fans with variable pitch blades and with variable speed drive.

Vertical air flow against static head assures even air distribution over the cooling surfaces.

The units are designed for pressures to 5,000 pounds per square inch and temperatures to 1500° F. Coils are located to provide sufficient static head for pump suction. Tubes can be removed and replaced quickly and all mechanical equipment is readily accessible from the ground.

Literature

11—Manganese Steel

American Manganese Steel Division of American Brake Shoe Company, Chicago Heights, Illinois, has published Bulletin 1144-NM on "Non-Magnetic Applications for Amsco Manganese Steel."

Presented in this bulletin are studies with illustrations of typical applications where non-magnetism and the ability to withstand shock and wear were equally vital factors in the selection of manganese steel. These studies may point the way to the solution of many problems.

12—Gas Freeing

Professor Jeremiah Thomas Morrill, Slidell, Louisiana, has compiled a booklet, "The Gas-Free Chemist," which has been certified by the National Fire Protection Association, American Bureau of Shipping.

The text is a summary of the author's experience and observations as a certified safety chemist doing gas freeing for a period of many years. Gas freeing is a term now used to express the elimination of explosive and fire hazard from any tank, drum or container which contained a substance which might create a hazard from toxic, explosive or fire dangerous to a human being. The term also includes the supervision of any piece of machinery or apparatus used in work on any ship or tank or container which might cause a hazard.

13—Rotary Drilling Hose

The B. F. Goodrich Company, Akron, Ohio, has published a bulletin which gives details of construction of each of its four lines of rotary drilling hose. Also included are data tables which list available sizes, type of construction, number of plies, approximate outside diameters, type of metallic reinforcement used in body and ends, approximate weight per hundred feet, delivery test pressures and the license class.

14—Forging Terms

Kropp Forge Company, Chicago, has published a 20-page illustrated booklet entitled "Glossary of Forging Terms." Words and terms are defined as used in forging practice.

15—Well Head Equipment

The National Supply Company, Toledo, Ohio, has published Bulletin 313 on National type B pressure pack well head equipment. The bulletin gives complete information on this equipment with illustrations. This equipment offers a great variety of interchangeable combinations to suit requirements and standard flange dimensions, to cooperate with blow-out preventer equipment meeting API standards.

16—Safety Equipment

Stewart R. Browne Manufacturing Company, 258 Broadway, New York 7, New York, has published a 24-page catalog of industrial safety equipment including portable flashlights, battery-operated inspection lights, vapor-proof portable extension lights, explosion proof portable extension lights, engine inspection lights and emergency grounding devices.

17—Spray Guns

The B. F. Goodrich Company, Akron, Ohio, has issued a booklet on the Lonn rubber blow and spray guns and water savers. The booklet explains the principle of the valves, which have only three working parts. Features include charts which show the cost of air or water delivered through various sized orifices when uncontrolled.

18—Bulldozers, Grade Builders

The Baker Manufacturing Company of Springfield, Illinois, has published Catalog 849 containing complete details and specifications on a new line of cable controlled bulldozers and gradebuilders.

Emphasis in the new cable controlled models is placed on ease of operation, low maintenance and adaptability to field conditions. They feature self-energizing, "air-conditioned," cone type clutches and brakes for cooler, smoother operation; and readily accessible brake and clutch adjustments.

William J. Morris Heads Continental Supply Directors

W. J. Morris

F. M. Mayer

Effective July 1 William J. Morris became chairman of the board of directors of The Continental Supply Company, a newly created office. As such he will be the chief executive officer of the company. Frederick M. Mayer succeeded Morris as president. Frank I. Brinegar was elected executive vice president and also a director.

Sales Department Changes Made by Allis-Chalmers

Marshal L. Noel, industrial sales manager for Allis-Chalmers, Tractor Division, Milwaukee, has been named general sales manager of the Tractor Division.

Marshal L. Noel

William J. Faulkner, formerly manager of the tractor division's Washington, D. C., office, becomes industrial sales manager. Assistant industrial sales managers are F. B. Harrison, formerly territory sales manager, and E. G. Kullmann.

Newly appointed agricultural sales manager is H. A. Gratner, previously Northwest Territory sales manager.

Louis Adams has been appointed harvester line sales manager, which includes all products manufactured at the company's La Porte works. S. H. Sorensen will be assistant harvester line sales manager.

Ernest Franks has been placed in charge of wheel tractor sales for industrial purposes, in addition to his former duties as manager of power unit sales.

Boyd S. Oberlink, until recently an assistant industrial sales manager, is appointed assistant to the vice president, Tractor Division.

Wins Sixth Award

McCord Corporation, Detroit, Michigan, has been awarded the Army-Navy E production award for the sixth time, for outstanding achievement in producing materials for war. The first award was made in March, 1942.

ORBIT VALVES

SAND VS. WING VALVES

The **ORBIT VENTURI TYPE VALVE** is manufactured with Stellite "J" Metal Seats which will not only withstand the abrasion of sand but is also corrosion resistant to all types of crude oil.

Orbit Venturi Type Valve

This valve can be furnished thru all fabricators of Xmas Trees or thru any of your local supply stores at a price comparable to that of other leading valves. The Orbit Valve requires no lubrication to effect a seal.

See 1944 Composite Catalog Pages 2193 to 2212

SERVICE REPRESENTATIVES

R. G. "Bob" Cole, Houston, Texas
Phone Fairfax 0057
Warehouse 407 Velasco Street
Houston

Earl F. Warren, Phone 919-W, Alice, Texas

Rex E. Galloup, Phone 6436, Lubbock, Texas

ORBIT VALVE COMPANY
TULSA, OKLAHOMA

Milne Named Distributor

A. Milne & Company has been named national distributor for wrought iron bars manufactured by A. M. Byers Company, Pittsburgh. The Milne organization operates warehouses in New York, Boston, Chicago, Pittsburgh and Philadelphia, and also an office in Washington.

Offices Moved

The Electrical Well Log Bureau, of Centralia, Illinois, has moved its offices from 219 New Fowler Building, to Suite 3, 140 South Poplar Street.

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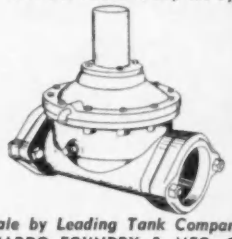
Tank Vapor Vent Line Valve—Type 1900

Diaphragm Actuated Type Combination Pressure and Vacuum Controlling Valve for Bolted, Welded, and Wood Tank use. Designed for satisfactory use in corrosive service.
Positive, Sensitive, and trouble free.
2", 3" and 4" Sizes
2 oz. to 16 oz. Pressure
4/10 oz. Vacuum. Slip On Type.



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ENARDO FOUNDRY & MFG. CO.
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ENARDO
Foundry and Mfg. Co.
TULSA, OKLAHOMA

FOR CHANGING FORMATIONS

ZUBLIN DIFFERENTIAL BITS

Four different cutting actions directed at bottom and sides of hole. Features safety and simplicity, trouble free drilling. See Composite Catalog or Bulletin and Prices upon request.

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